PROTECTING CHILDREN: THE USE OF MEDICATION IN OUR NATION'S SCHOOLS AND H.R. 1170, CHILD MEDICATION SAFETY ACT OF 2003

HEARING

BEFORE THE

SUBCOMMITTEE ON EDUCATION REFORM

COMMITTEE ON EDUCATION AND THE WORKFORCE

HOUSE OF REPRESENTATIVES

ONE HUNDRED EIGHTH CONGRESS

FIRST SESSION

HEARING HELD IN WASHINGTON, DC, MAY 6, 2003

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PROTECTING CHILDREN: THE USE OF MEDICATION IN OUR NATION'S SCHOOLS AND H.R. 170, CHILD MEDICATION SAFETY ACT OF 2003

TUESDAY, MAY 6, 2003

HOUSE OF REPRESENTATIVES,

SUBCOMMITTEE ON EDUCATION REFORM,

COMMITTEE ON EDUCATION AND THE WORKFORCE

WASHINGTON, D.C.

The subcommittee met, pursuant to call, at 2:07 p.m., in Room 2175, Rayburn House Office Building, Hon. Mike Castle [chairman of the subcommittee] presiding.

Present: Representatives Castle, Wilson, Musgrave, Woolsey, Mrs. Davis of California, Case, Kucinich, Van Hollen, and Majette.

Also Present: Representative Burns.

Staff Present: David Cleary, Professional Staff Member; Kevin Frank, Professional Staff Member; Melanie Looney, Professional Staff Member; Krisann Pearce, Deputy Director of Education and Human Resources Policy; Liz Wheel, Legislative Assistant; Deborah Samantar, Committee Clerk/Intern Coordinator; Joe Novotny, Minority Staff Assistant/Education; Lynda Theil, Minority Legislative Associate/Education; and Ann Owens, Minority Clerk

OPENING STATEMENT OF CHAIRMAN MICHAEL N. CASTLE, SUBCOMMITTEE ON EDUCATION REFORM, COMMITTEE ON EDUCATION AND THE WORKFORCE, U.S. HOUSE OF REPRESENATIVES, WASHINGTON, D.C.

Chairman Castle. A quorum being present, the Subcommittee on Education Reform and the Workforce will come to order.

We are meeting today to hear testimony on "Protecting Children, the Use of Medication in Our Nation's Schools, and H.R. 1170, Child Medication Safety Act of 2003."

Under committee rule 12(b), opening statements are limited to the chairman and the ranking minority member of the subcommittee. Therefore, if other members have statements, they may be included in the hearing record.

With that, I ask unanimous consent for the hearing record to remain open 14 days to allow members' statements and other extraneous material referenced during the hearing to be submitted in the official hearing record. Without objection, so ordered.

Let me say good afternoon to the witnesses, and let me begin by welcoming our guests, witnesses, and members of the committee. Thank you all for being here today. I appreciate the opportunity to discuss the Child Medication Safety Act and look forward to your comments and recommendations

On September 29, 2000, the Committee on Education and the Workforce held a hearing entitled "Behavioral Drugs in Schools: Questions and Concerns." Witnesses testified about the use of psychotropic drugs by youth. In September of 2002, the House Committee on Government Reform held a hearing to explore the use of psychotropic drugs in our Nation's schools. They found that in many cases, parents are being required by school officials to place their child on a psychotropic medication such as Ritalin or Adderall to allow them to remain in the classroom. Psychotropic drugs, when prescribed and monitored by a licensed medical practitioner, can be helpful for individuals properly diagnosed with attention deficit disorder (ADD) or attention deficit-hyperactivity disorder (ADHD).

These medications can help to control the symptoms of their disease so that these individuals can function. However, these drugs have the potential for serious harm and abuse. They are listed on schedule 2 of the Controlled Substances Act. Drugs are placed on schedule 2 when the drug has a high potential for abuse or may lead to severe psychological or physical dependence.

School is an important source of information for families, and we encourage an open line of communication between schools and families. Parents, however, should never be forced to decide between getting their child into a school and keeping their child off of potentially harmful drugs. School personnel should never presume to know the medication needs of a child. Only medical doctors have the ability to determine if a prescription for a psychotropic drug is physically appropriate for a child.

To address the significant problem, my colleague on this committee, who will be here with us shortly, Representative Max Burns of Georgia introduced H.R. 1170, the Child Medication Safety Act of 2003. The goal of this Act is straightforward. It would require states to establish policies and procedures prohibiting school personnel from requiring a child to take medication in

order to attend school. This would prevent parents from being forced into making decisions about their child's health under duress from school officials.

We look forward today to hearing from our witnesses about the benefits and dangers of psychotropic drugs and about the efforts by parents and state legislators to address the coercion issue.

WRITTEN OPENING STATEMENT OF CHAIRMAN MICHAEL N. CASTLE, SUBCOMMITTEE ON EDUCATION REFORM, COMMITTEE ON EDUCATION AND THE WORKFORCE, U.S. HOUSE OF REPRESENATIVES, WASHINGTON, D.C. – APPENDIX A

Chairman Castle. With that, I yield to my colleague from California, Ms. Woolsey, for any, whatever opening statement she wishes to make.

OPENING STATEMENT OF RANKING MEMBER LYNN C. WOOLSEY, SUBCOMMITTEE ON EDUCATION REFORM, COMMITTEE ON EDUCATION AND THE WORKFORCE, U.S. HOUSE OF REPRESENATIVES, WASHINGTON, D.C.

Ms. Woolsey. Thank you, Mr. Chairman. I said before when the subject of psychotropic drugs, particularly the subject of Ritalin, has come up before this committee, that I raised four children, and I am absolutely sure that their schools would have suggested Ritalin for them if they were in school today, and I am as just as certain that I would not have taken the bait, because I knew the difference then and I know the difference now, and this is what I think we need to be talking about today, is the difference between boys behaving badly versus a serious problem, versus behavior modification. And that is what I hope we are going to be talking about.

I have concerns, because I think that we are blurring the line between the behavior of an active high-spirited child and child with a disability, and this is not to suggest that attention deficit hyperactivity disorder, ADHD, is not a very real disability for many children. ADHD robs so many children of their parents and their parents of the pleasures of child and the pleasures of family, and children are labeled as bad for actions they can't control. The parents find themselves frustrated and often angry, and that is not a way to feel about your kids as you are raising them.

Properly prescribed and coupled with other therapies, Ritalin and other psychotropic - it has enabled thousands of children with ADHD to achieve at school, to bond with their family and to feel better at home. The success of Ritalin has been well documented, and it is an important resource that medical professions should be able to consider when planning treatment for a child with ADHD.

However, the growing increase in the manufacture and prescription of these drugs is a cause for concern, as far as I am concerned.

The decision to treat a child with any drug, but certainly a stimulant like Ritalin, must be made very carefully and only after comprehensive evaluations and diagnosis. It is crucial that

parents be well informed about the drug, both its possible successes and its possible side effects. If it is being considered for their child. And it goes without saying that parents should have the final word in deciding whether or not their child takes a drug like Ritalin.

I look forward to your discussion and hearing from you, because you are a panel of experts, and we want to hear what you have to say about this. Thank you very much.

WRITTEN OPENING STATEMENT OF RANKING MEMBER LYNN C. WOOLSEY, SUBCOMMITTEE ON EDUCATION REFORM, COMMITTEE ON EDUCATION AND THE WORKFORCE, U.S. HOUSE OF REPRESENATIVES, WASHINGTON, D.C. – APPENDIX B

Chairman Castle. Thank you, Ms. Woolsey.

We have a very distinguished panel of witnesses before us, and I thank them for coming today.

The first witness is the Honorable Katherine Bryson. Ms. Bryson currently serves as the state representative for the 60th district of the Utah House of Representatives. I come from Delaware, so we do not have 60 of anything in Delaware. That number impresses me. She is the chairwoman of the Business and Labor Committee and a member of both the Judiciary Committee and the Higher Education Appropriations Subcommittee. Additionally, Ms. Bryson is the sponsor of H.B. 123, a bill to prohibit school personnel from making certain medical recommendations for a child, including the use of psychotropic drugs. She is also the state vice chair for the American Legislative Exchange Counsel and a member of the National Federation of Women Legislators.

The second witness will be Dr. William B. Carey. Dr. Carey is the director of behavioral pediatrics at the Children's Hospital of Philadelphia. Prior to his current position, he served as a clinical professor of pediatrics at the University of Pennsylvania School of Medicine. Dr. Carey is also the author of several books, including *Developmental Behavioral Pediatrics*, *Understanding Your Child's Temperament*, and *Coping With Children's Temperament*, a *Guide for Professionals*.

Our final witness today will be Dr. Lance D. Clawson. Dr. Clawson is currently a private psychiatrist in Cabin John, Maryland. Additionally, he serves on the D.C. Commission on Mental Health in Washington, D.C. Prior to his current position, Dr. Clawson worked as a staff psychiatrist at the Walter Reed Army Medical Center in Washington, D.C. He is the recipient of several awards, including the American Academy of Child and Adolescent Psychiatry Presidential Scholar Award, and the Washington Psychiatric Society Award For Outstanding Services.

Before the witnesses begin their testimony, I would like to remind our members who are here today that we will be asking questions after the entire panel has testified. In addition, committee rule 2 imposes a 5-minute limit on all questions.

Before we begin with Ms. Bryson, the light system you have in front of you will show green for 4 minutes, yellow for 1 minute, and red at the 5-minute mark. I think you can probably figure out what all that means, without further explanation. But essentially when you see the red, if

you could finish winding up, that would be wonderful.

And then when the witnesses, or all 3 of you are through testifying, we will go to the various members up here, and the exchange is also measured by 5 minutes, including questions and answers, just so you understand basically what the rules are.

With that, we will start with Ms. Bryson. Thank you for being here.

STATEMENT OF HON. KATHERINE BRYSON, STATE REPRESENTATIVE, UTAH HOUSE OF REPRESENTATIVES, OREM, UTAH.

Ms. Bryson. Thank you. Thank you so much for the opportunity to come before you this afternoon, and thank you for the opportunity to speak about this grave national issue. Let me start by commending the committee for recognizing that the coercive use of psychotropic drugs on children is not a few isolated incidents, but is actually impacting hundreds, if not thousands, of families across America.

While Utah was once the Ritalin capital of America, this schedule 2 drug seems to have dropped to a national average level now in our state. However, in the wake of raised public awareness about the risks of Ritalin, other stimulants like Adderall and the amphetamine Dexedrine are deluging the child psychiatric market in its place. In fact, Adderall now comprises 32 percent of the national stimulant market, with 6.1 million prescriptions in the year 2000, and 248 million in sales. Yet this drug has already been cited in a North Dakota criminal judgment in 1999, where a young father was not held criminally responsible for the murder of his 5-week-old daughter, because he was in a psychotic state caused by Adderall. Psychiatrists testified that the drug induced the psychotic state causing delusions.

There are other drugs not covered by schedule 2 of the Controlled Substances Act that are also forced onto children, including Cylert, a schedule 4 drug, and antidepressants that are not scheduled at all.

Zoloft and Paxil are among the group of new antidepressants that, in 1999, were prescribed to 1.7 million children. In fact, between 1995 and 1999, there was a 19-fold increase in 2-year-olds to 19-year-olds prescribed these drugs. A Fox National News series last November found that a person taking Paxil is 8 times more likely to attempt and commit suicide than if taking a placebo.

More than half of the last 12 school shootings have been committed by teenagers who were taking psychotropic drugs.

Meanwhile, school personnel faced with children who often have not been properly taught to read, who may be coming to school on a breakfast of sugar or no breakfast at all, who could be affected by lead, mercury or other toxic substances, or a plethora of explainable reasons, are assessing them in the classroom as having a learning disorder or attention deficit hyperactivity

disorder.

From here, parents are being coerced into drugging their children with threats of the child's expulsion or charges of medical neglect by child protective services against the parents who refuse to give or take their child off a psychotropic drug. Parents are losing their right to choose. They are being told that ADHD is a neurobiological disorder, when even the Surgeon General's 1999 report on mental health cannot confirm this.

They are being denied access to tutors or additional education services for the sake of a quick-fix drug like Ritalin that some studies say is more potent than cocaine.

Often once the child is medicated, the various side effects associated with the drug and which I have found were too often not disclosed to the parents when they were first given the prescription, become apparent. The child could have difficulty sleeping or eating. They may have stomach problems and may become irritable. Worse yet, when withdrawing from the drug, he or she may become so emotionally disturbed as to feel suicidal.

While the parents may want to take the child off the drug at this point, they are too afraid of the implied consequences and feel powerless.

While we spend over \$50 billion on the war on drugs, we are allowing our teachers to be used as mental health clinicians, diagnosing learning problems as disorders and diseases and forcing this belief on parents. I realize the gravity of the situation dealing with Ritalin after being contacted by many parents in Utah and hearing what I can only describe as horror stories, some of which I have attached to my written testimony. I ran a bill in 2002 to prohibit school personnel from pressuring parents into drugging their children. That bill actually passed by an overwhelming majority of 89, but tragically the governor of our state failed to listen to the needs of our families and vetoed the bill. Thus, condoning the coercive drugging of Utah's future generation.

Unless we as legislators do something about this, we become accomplices. I support H.R. 1170, but I have to say that I believe the committee would be remiss if they did not broaden it to include all prescribed psychotropic substances. Again, thank you for allowing me to come forward.

Chairman Castle. Thank you, Ms. Bryson. We appreciate your testimony.

WRITTEN STATEMENT OF HON. KATHERINE BRYSON, STATE REPRESENTATIVE, UTAH HOUSE OF REPRESENTATIVES, OREM, UTAH – APPENDIX C

Chairman Castle. And we will now turn to Dr. Carey.

STATEMENT OF WILLIAM CAREY, M.D., DIRECTOR OF BEHAVIORAL PEDIATRICS, CHILDREN'S HOSPITAL OF PHILADELPHIA, PHILADELPHIA. PENNSYLVANIA

Dr. Carey. Mr. Chairman, ladies and gentlemen, in the last two decades, the United states has

experienced a great increase in the diagnosis of attention deficit hyperactivity disorder, or ADHD, and its treatment with stimulants.

Not only child health professionals, but now also a wide variety of unqualified persons such as preschool teachers and acquaintances are freely offering the diagnosis and confidently urging parents to accept their judgment to obtain drug treatment such as methylphenidate or Ritalin for the child. If the physician formally applies a label, educational and governmental authorities sometimes attempt to coerce parents into accepting the verdict and giving the medication or face the possibility of exclusion of the child from the school or being judged unfit parents.

This chaotic situation urgently requires intervention at several levels, including the Federal Government.

One should acknowledge at the outset that virtually all well-informed observers agree that about 1 to 2 percent of the child population are so perversely overactive or inattentive that they are very difficult for anyone to manage. And although the cause of their problems is often not clear, they are likely to perform better with medication as a part of their management. However, why are up to 17 percent or more children being given this label, and why is 80 percent of the world's methylphenidate being fed to American children?

Several reasons. In the first place, the diagnosis of ADHD is very impressionistic and highly subjective, making it easy to include a broad variety of children.

For example, the component symptoms such as often talks excessively are not clearly different from normal. There is no confirmatory laboratory tests, nor proof that the behaviors are in fact due to brain malfunction. The diagnosis is usually made at the practical level by vaguely worded brief questionnaires.

Secondly, even if one accepts the current definition, there is abundant evidence that it is not being applied rigorously at the practical level. Two large surveys of medical practice in the leading psychiatric and pediatric journals have established that about 60 percent of the time medical practitioners are not using the established criteria.

Thirdly, contrary to the popular notion, the stimulants being prescribed today are not specific for ADHD. Improved behavior when taking them is not proof of the diagnosis. Ritalin would make any of us function better, you and me.

I am one of a group of pediatric moderates who say that both the radical critics who speak of conspiracies and fraud and the American Psychiatric Association's diagnostic system are wrong. We believe that these children do have real problems, but that the diagnosis and management is not so simple as it is presently being proposed by the association's official manual and management guidelines.

There is no easy answer to this chaotic situation. The main elements of a solution would be, one, a better diagnostic system; two, better research; three, better education of professionals and the public, and as to the range of normal behavior; four, better individualized evaluations of

children; five, better treatment with greater reliance on psychosocial and educational interventions; six, better monitoring of aggressive advertising by the drug companies; and number seven, better reimbursement schemes so that physicians can be allowed to take the time necessary to do adequate evaluations.

The appropriate professional groups must solve the first five of these steps, but the last two, drug companies and medical insurance, are within the proper range of the federal government.

To these measures, I add the need for national legislation to prevent educational and governmental officials at any level from requiring parents to accept the diagnosis and use drug treatment for fear of legal actions of exclusions from school or child protective agency interventions for your special consideration today. My reasons are simple. The definition of ADHD is extremely vague. The application of it in medical practice today is inadequately disciplined. And the current treatment is nonspecific and noncurative.

For parents to be penalized in any way for skepticism and noncompliance would be medically unsound and ethically unsupportable. Thank you.

Chairman Castle. Thank you, Dr. Carey.

WRITTEN STATEMENT OF WILLIAM CAREY, M.D., DIRECTOR OF BEHAVIORAL PEDIATRICS, CHILDREN'S HOSPITAL OF PHILADELPHIA, PHILADELPHIA, PENNSYLVANIA – APPENDIX D

Chairman Castle. Dr. Clawson.

STATEMENT OF LANCE CLAWSON, PRIVATE PSYCHIATRIST, CABIN JOHN, MARYLAND.

Dr. Clawson. First of all, let me thank Chairman Castle for the opportunity to appear before the subcommittee. My testimony today is on behalf of the American Academy of Child and Adolescent Psychiatry, or AACAP for short. I ask that my written remarks be entered into the record.

The American Academy of Child and Adolescent Psychiatry is a national professional association representing 6,700 child and adolescent psychiatrists who are physicians with at least 5 years of specialized training after medical school, emphasizing the diagnosis and treatment of mental illness in children and adolescents. The AACAP is concerned about the effect of H.R. 1170, legislation that was attached as an amendment to H.R. 1350, the Individuals With Disabilities Education Act.

This amendment requires schools to develop policies and procedures prohibiting school personnel from requiring that a child be placed on psychotropic medications as a condition of attending school. Although there have been highly publicized and isolated events that cause us all concern, there is no reliable evidence that such practices regularly occur or that this is a pervasive problem. Medication assessment and prescription is the exclusive role of a qualified medical

professional, not school personnel. The decision to include medication as part of the treatment plan for a child or adolescent with a mental illness should be a decision agreed to by parents and caregivers in close consultation with a qualified and trusted medical professional.

Schools are critically important, as they are a source of information for families about the children and their children's emotional and mental well being. The importance of open communication between school professionals and families about the health and well being of students, and where indicated, the freedom to recommend a comprehensive medical evaluation cannot be overstated.

The AACAP is concerned about legislation that would restrict school professionals from communicating with families about legitimate mental health-related concerns. While H.R. 1170 does not explicitly prohibit communication between school personnel and families about mental health concerns, its stern enforcement provisions could cause school personnel to be fearful about communicating with families regarding a student's emotional or behavioral difficulties.

The more pressing issue as reported by the Surgeon General in 1999 is the unacceptably high number of children with mental illnesses that are not being diagnosed or treated. The AACAP is concerned that H.R. 1350 may create a barrier for children and adolescents to treatment, and many of these children are identified in school settings.

As noted in the opening remarks, we are here today to talk about the identification, diagnosis, and treatment of childhood mental illnesses such as attention deficit hyperactivity disorder, or ADHD for short.

As a child and adolescent psychiatrist, when I think of ADHD, I think first to the faces of children and families that I have seen. For instance, I think of an 8-year-old boy who is about to be left back in 2nd grade due to his disruptive behavior. He has poor peer relationships, his schoolwork is very inconsistent, the teachers have labeled him difficult to control. He has one other friend in school, and he is teased mercilessly by his peers. He breaks down at home saying that he is stupid and no one likes him. He is already convinced that he is bad and different, and with appropriate evaluation and treatment, this young man made a tremendous turnaround.

I am as reminded of a 15-year-old girl. She is in 9th grade. She has a measured IQ of 140. She is well liked. She has never really had had to put out much effort in school, but here she is in 9th grade. She is starting to fail classes, overwhelmed trying to keep up, cannot take notes, and cannot keep her mind focused. She is often getting her homework done and then forgetting to hand it in. She is having trouble being organized. She is anxious and depressed about her performance. Her parents are overwhelmed, and once again this individual with appropriate diagnosis an appropriate treatment intervention had a tremendous turnaround.

And finally, I think of a 42-year-old insurance broker who has been treated for depression and anxiety for years. He was relieved and appreciative when he received an accurate diagnosis, but felt he had wasted 20 years of his life with these feelings of being ineffective.

So let me be very clear. ADHD is not an easy diagnosis to make, and you cannot do it in 5, 10, 15, or even 30 minutes, and it should not be taken lightly. There is good research to show that this diagnosis occurs in approximately 5 percent of the child and adolescent population. Approximately 50 percent of these individuals maintain their symptoms into adulthood, and we have made a number of recommendations that are listed at the end of my testimony, and which you can refer questions to me later.

But I just want to underline that the research really demonstrates that it is really a minority of children that are being identified and being treated for this condition. It varies between localities, but in general, there is an under diagnosis in treatment.

So in summary, let me emphasize that child psychiatric disorders including ADHD are very real and diagnosable illnesses that affect a lot of kids. The good news is that they are treatable. We cannot cure all the kids we see, but comprehensive individualized intervention can significantly reduce the extent to which their conditions interfere with their lives. So we must free teachers and parents to collaborate freely in order for the early identification and appropriate evaluation and intervention with these children. Thank you.

WRITTEN STATEMENT OF LANCE CLAWSON, PRIVATE PSYCHIATRIST, CABIN JOHN, MARYLAND. – APPENDIX E

Chairman Castle. Well, let me thank all of the witnesses. You raised many strong questions that we need to address or are being addressed, perhaps by legislation that is being introduced in states and before us here. But obviously we understand all this is problematical, too. So perhaps we can shed some light on it with a few questions here.

Let me start the questions. I will yield myself 5 minutes, and I will start with Ms. Bryson. Do you think that your own activities have made a difference in terms of what is happening in Utah with respect to the schools being a little more reluctant to make it a condition that students must have psychotropic-type drugs in order to come back to school? Do you find from your study of this and you have studied it more extensively than I have, that there are pockets where there is a problem that is abused much more than it is in other areas, such as certain school districts or administrators? What can you tell me about those subjects?

Ms. Bryson. Thank you for the opportunity to address your questions. First of all, maybe I will start with your latter question having to do with pockets. I believe that there are some within our state. I know it was brought to my attention that one school in particular had a high number of students who were all on Ritalin. There were classrooms where apparently there was some agreement that 80 percent of the kids in the class in a fourth grade class needed to all be on Ritalin or a psychotropic drug. That is very frightening.

I come from a state where a quarter of our population is children. There have absolutely been situations within the state of Utah. The legislation that I was involved with in the year 2002 brought the issue to the forefront, and I know that our school and our board of education, has taken a few very minimal steps with regard to this.

I will say that while I was working on the legislation, I did hear from several school districts that were looking at this and of course had some concerns, and we discussed this back and forth. I think that one in particular probably led the charge, but we will be meeting with some of our administrative Rules Committees in the next few months trying to look at what has been introduced by the school administration.

Chairman Castle. Thank you. I could go further with all that, but I want to ask the others a question. I was going to ask you separate questions, but I am going to try and combine this perhaps into one. I am a little concerned about what role the teachers and the schools play in this. Our concern with legislation obviously is that it is a feeling that the schools are sort of dictating the need to get medical help. I assume in each instance that is happening. They go to a doctor and get the prescription, that is the way it actually works. And I agree with what you said, Dr. Carey, that we do need to train our teachers more thoroughly, especially to make sure they are not inappropriately identifying children who have disabilities.

But I am concerned about that. We have enough trouble training our teachers to teach math, English or whatever the subject matter may be. There is a lot of discussion about that. They have to deal with children with a variety of disabilities, some of which are not the disabilities that we are talking about here. They have just the normal social problems to deal with as well. And I am not sure exactly what responsibility we should be giving to these teachers. Dr. Clawson, is it a teacher's responsibility to or is it the responsibility of the parents or perhaps everyone together?

But I do not want to shift too much of the burden to the schools, and I am not sure that professionally they are capable of that. What additional training would they need in order to do this? I am not sure how much more professional training teachers can stand out there. So that is a series of questions inherent in my sort of statement if you could take a stab at it, both of you, please.

Dr. Carey. I find that teachers, in spite of all their training, know very little about the normal range of behavior. I think that this charge could be levied against some of my fellow medical practitioners as well. I spent 35 years studying normal term remit differences, and I know that everybody has them, that some of them are hard to get along with, and that only rarely do they indicate that there is something wrong with the brain.

Most kids who are active are just active and there is nothing wrong with them. Most kids who are inattentive are just less attentive than average. That does not mean that you have a pathological difference just because you are a little bit off of the mean. And teachers need to appreciate that just because a kid is annoying doesn't mean that you have to ship them off to a physician with a request for medication. I am covering an awful lot of material in just a few words, but to sum it up, I would say one thing that needs to happen in teacher education is that they need to have a greater appreciation of normal variation of kids' behavior and to know that there are some normal behavioral traits of stubbornness, shyness, loudness and so on which are annoying, but which are not abnormal and do not deserve to be treated with medication.

Chairman Castle. Dr. Clawson, the same question to you, maybe with some emphasis on just what responsibility teachers and administrators should have in this circumstance too.

Dr. Clawson. Well, my sense is that it is not the purview of educators to recommend medication. They know that. That is actually the job of a licensed and trained physician with at least a reasonable amount of mental health expertise. Teachers are generally good at recognizing when they are having difficulty with a child. If that is the case, then the typical process is that they may discuss it with their principal, the school counselor, and the child's parents to come to some kind of collaborative conclusion that perhaps the problems are severe enough or the usual methods that they have attempted to rectify the problem if they have not been effective, so they would refer for a medical evaluation and a mental health evaluation.

That is very appropriate. What happens from that point on has nothing to do with the school. The reality is it is the physician's job in collaboration with the patient and the patient's parents with information provided by the school as well as multiple other sources, including thorough medical evaluation, laboratories, studies, et cetera, to determine whether medication might be helpful.

There are cases that come to me, which I do not prescribe medication. I may suggest further classroom interventions, even though I am an individual that does prescribe medication. It is not up to the school to decide that, and it is also up to the physician if the school is insisting on medication. It is up to the physician to advocate for the patient to do what is appropriate, and therefore my sense also is that many times there is an over reliance on medication when there is an undersupply of mental health professionals, and we have a terrible undersupply of qualified mental health professionals in this country to assess children. So many pediatricians or family practitioners that do not have a significant mental health background are being sent; saying this child is out of control, do something.

Chairman Castle. My time is up, but I do want to ask you a question to understand where you are coming from vis-à-vis what we do, which is creating laws here. Mr. Burns has joined us. What is your position on this legislation, which is before us? It basically says that school personnel at some level cannot absolutely rule that the kid cannot attend the school unless the child is receiving medical treatment. Do you support, oppose, or remain neutral with respect to this?

Dr. Clawson. Conceptually it is an interesting idea, because what we have been talking about, at least the other witnesses have testified to abuses. However, I am talking about the general need to enhance collaboration between families and schools which is shown to -

Chairman Castle. I do not have a problem with that. I -

Dr. Clawson. Once we start sanctioning schools for bringing up their concerns, we could be creating further barriers. That is -

Chairman Castle. But they are not bringing up their concerns. They are making an absolute barrier to the child attending the school, and that is the question. I have the same question.

Dr. Clawson. I have seen no evidence to show that this is pervasive. I do not doubt that there are situations where this has happened, but that is a miscarriage of the educational system. I myself have been involved in cases where the school wants the child on medication. The recommendation is the child should be on medication after a thorough evaluation and the parents continue to refuse, and so that is dealt with in an open forum in terms of how to provide the child services, even though they are not on medication. And they are potentially not learning or even posing a danger.

Chairman Castle. Maybe I should drop out of this and let you and Ms. Bryson debate each other about how pervasive it really is.

Dr. Clawson. I could not say that, but I have seen nothing in the literature.

Chairman Castle. I believe I am going to - oh, I am sorry. Dr. Carey, did you want to comment on that?

Dr. Carey. Perhaps we can say that the school has the prerogative to exclude a child if he or she is so disruptive that it is destroying the classroom proceedings, but they do not have the right to indicate what should be done about it. That is fairly clear.

Chairman Castle. That is helpful.

Let me, at this time; yield 5 minutes to Mr. Case.

Mr. Case. Thank you, Chair. I would like to stay with the same train of thought, because I do have some of the same concerns. I preface my remarks by saying that I cosponsored this legislation with my colleague, Mr. Burns, because I share his belief that perhaps there are situations out there that represent abuse.

Dr. Clawson, you are probably as good a person to ask as any. We have an obligation under IDEA to provide a free and appropriate education. That has been interpreted rightly to require that children with special needs be accommodated in the regular classroom, not shunted to the side.

How frequent is it that a child with special needs who is diagnosed with a condition that Ritalin could address satisfactorily, no question about it, does not take that drug, could not be reasonably accommodated in the regular classroom? That is the question I have. I guess the question that I am really putting to you, or thinking out loud about and inviting any of your comment about, is: is an absolute prohibition really the right place for us to go? Are there situations where we do want to say that we cannot accommodate, "we" being the school, in conjunction with the medical providers and under the diagnosis of the medical provider, what we do not believe that the child can be accommodated in the regular classroom without some medication? That is the question, I think.

Dr. Clawson. In my experience, that is a frequent occurrence. Many times medication allows the child to be in what IDEA would refer to as the least restrictive environment. And the aim would be

the regular classroom.

I do not know if you have been in many elementary school classrooms recently, but they tend to be very large, and the teachers really have a difficult time managing them. To put children that are very disruptive in a regular classroom tends to disrupt the educational process for all the children.

So I would say there are probably many cases that I run into on a weekly basis where the judicious application of psychotropic medication after a thorough medical and psychiatric evaluation does help the child function within the regular education setting, or within the least restrictive environment.

Mr. Case. How do we accommodate that basic thought - which I think makes a lot of common sense, with the concern that, in essence, we are overmedicating in order to really cop out, if I can put it that way, of the need to accommodate a child with special needs in a way that takes care of his or her rights under federal law? What the bill says as introduced at least, and we can obviously change it, is "any school personnel". I suppose that means any medical doctor on staff rather than teachers, but is that the place to do that. I assume you have worked with special needs children.

Is the place to do that in the formulation of the IEP, that we could say in the context of that IEP that if there is that situation where a child can really only reasonably be accommodated in a classroom with some use of drugs refuses that medication with his or her parents' input, that that could be a condition of not being accommodated in the regular classroom and really retreated outside the classroom?

Dr. Clawson. Yeah. I think that is -

Mr. Case. And be subject to the full range of the ability of the parents to sue and have a due process hearing, if that is what it took - .

Dr. Clawson. Those rights are in place now and that is a process I have been involved in before in terms of children requiring more restrictive environments because the family is not in support of medication.

Mr. Case. Is that process working?

Dr. Clawson. In my experience it is. It can be fairly contentious, and the parents have to be fairly motivated or tough to resist the school saying, they would like to have your child in the regular class or this type of class, but we really cannot manage them.

Mr. Case. So perhaps what we are really getting at in the context of this legislation is a situation where the parents might not be quite as involved in the IEP where the schools possibly are overmedicating or are too quick to medicate, if I can put it that way.

Dr. Clawson. Well, the schools are not the ones medicating.

Mr. Case. I understand that, but you have got the bill saying "school personnel".

Dr. Clawson. Schools do not medicate. They can mention medication, but the most a school can legally or realistically do is encourage the family to take the child to a physician for an evaluation. We hope at that point that the physician engages in a comprehensive medical psychiatric assessment to determine the need for psychotropic medication.

My concern is with this amendment. Even though it might sanction those individuals who are abusing it, this legislation could throw a pall over the entire educational system. Teachers feel tremendous pressure to try and accommodate children in the regular classroom. They feel pressure to do that and yet they are many times overwhelmed and are already worried enough about being sued

When you go in these IEP meetings, the schools are constantly on the defensive. We throw in more laws, and they are only going to be more concerned. So basically, the schools will cease to be helpful, because they cannot say anything. They have to remain extremely legalistic. It is sad to see, because you lose that collaborative process between parent and school. And all the research shows that when you have a good family school collaboration, you have a better school. Okay?

So the more the school is fearful of engaging the parents and expressing themselves freely, the more we are going to inhibit this collaboration, which is so necessary.

If we are taking this one-size-fits-all amendment and just tell everyone that they cannot say anything, then I think we are really kind of throwing the baby out with the bathwater on some level.

Mr. Case. Thank you very much.

Chairman Castle. Thank you, Mr. Case.

We will now turn to Mr. Burns, who is the sponsor of the legislation. I believe he has a statement, and we will yield to him for that and his questions.

STATEMENT OF REPRESENATIVE MAX BURNS, COMMITTEE ON EDUCATION AND THE WORKFORCE, U.S. HOUSE OF REPRESENATIVES. WASHINGTON. D.C.

Mr. Burns. Thank you, Mr. Chairman. I appreciate the committee holding these hearings today. I apologize for stepping in late, but I want to start with a statement and then have an opportunity to pose a few questions to the panel.

The Child Medication Safety Act of 2003, H.R. 1170, addresses a significant problem facing children and their parents throughout the nation. Some schools unfortunately are requiring parents to place their child on drugs in order to attend school, and I think this is wrong. No parent should ever be coerced by a teacher, principal, or other school official to place their child on a psychotropic drug. No child should ever face the denial of educational services only because they

are not taking a psychotropic drug.

Psychotropic drugs such as Ritalin, Adderall, or other drugs when carefully prescribed by a licensed medical practitioner and carefully monitored in the administration, can certainly help an individual with attention deficit disorder or attention deficit hyperactivity disorder, controlling symptoms of their disease so that they can function effectively.

These can be miracle drugs for many people, and when properly diagnosed and properly administered, many people benefit greatly from their use. But for those who do not need these drugs, they can be harmful. In several sad instances, children that have been placed on these drugs have died from complications arising from psychotropic drug use. H.R. 1170 is not antischool. It is not antiteacher. It is not antimedication. This bill is designed to be pro-children and pro-parents.

The legislation simply protects our children from unnecessary medication, and it provides the parents with the decision-making power that they should have for their children already.

I offered a modification of this bill as an amendment during the markup of H.R. 1350, the IDEA reauthorization. This amendment was broadly supported in a bipartisan manner. Because the amendment only applies to schools receiving special education funds, I am hopeful that this legislation will move as a stand-alone measure as well so that parents with children in all of our schools receiving federal funds can have the freedom to choose when their child should be medicated.

I thank my cosponsors for their support. I urge the members of the committee to support this legislation as it works through, and I would like to again thank the chairman for holding the hearing today and thank the panel for their input.

I would like to ask Dr. Bryson to perhaps refresh my memory on the challenges in Utah. Is this a pervasive problem? Do you see this as pervasive?

WRITTEN STATEMENT OF REPRESENATIVE MAX BURNS, COMMITTEE ON EDUCATION AND THE WORKFORCE, U.S. HOUSE OF REPRESENATIVES, WASHINGTON, D.C. – APPENDIX F

Ms. Bryson. Thank you. And I wish it was, Doctor, but it isn't. I do serve in the Legislature, but thank you.

Mr. Burns. You sit with other doctors. I thought perhaps. I misspoke.

Ms. Bryson. Thank you. I will tell you that running this legislation in the year 2002 was a real eye-opener, because I discovered that Utah was not alone. There were a number of states, particularly in the eastern part of the United States, and neighboring states around me, including Colorado, Nevada, Arizona, and California, were all dealing with similar problems, where there was coercion felt by parents, that if they did not give these drugs to their children, their children would not be allowed in the classroom.

In our state we have what is called DCFS, the Division of Child and Family Services, and it was a condition of neglect if you did not give your child medication.

Now, in my state as well, I mentioned earlier that a fourth of our population are kids. I am a mother of 6 children. You label my oldest child Lisa with ADHD, and I cause a ruckus in my school. Most likely, my other 5 children are going to suffer in school, and that is what is really sad in the state of Utah. Once the child is labeled, then what is the recourse for the parent? I mean, this is supposed to be parental rights, and what we were trying to do with some legislation was to ensure that the parents had the information. By the way, they are the taxpayers. They are the ones that support us in government in these offices, and we need to be aware that they have rights. These are their children. And I believe that what we were trying to do was to ensure that they did.

Unfortunately, I mentioned earlier that our governor did not support that legislation, although it was unanimous in our House and our Senate. But it is pervasive. I believe that there are problems. I believe that particularly young boys are being labeled, especially those that are rambunctious and anxious. They do fidget in the classroom. I have often suggested that those members of the Legislature in my state have every single one of these remarkable, what I would call qualities that may label them as ADHD. I have often thought, yes, and you have to be aggressive to become a legislator. So maybe that as well.

But in looking at all of this, it is a sad situation when we have to drug kids to teach them. I taught school myself in California back in the mid 1970s. I had kids who were in my little 5th grade class who were going out and being medicated at noon and coming back in the classroom, and they were literally what I would term zombies for the rest of the afternoon. Now, that was not a situation where I could help meet their education needs. They were in a position where they were not receptive. They could not be receptive, and it was a wonderful classroom. They were now compliant. Yes, they were compliant, but were they teachable and were they learning anything? I do not believe so

I believe it was a total disservice to them, and unfortunately, I have to say in defense of teachers, I think that this is a responsibility we should not be placing on them. They are there to be teaching. That is not what they went to school to learn. I think all of us that were teaching school believed that we were coming there to give help to see young people succeed. I do not believe that the intent was ever to have us start diagnosing. My heart actually goes out to teachers that have been expected today do this. I think it is a real misplacement of responsibility.

Mr. Burns. I think as our educational system recognizes that their role is one of a participant, as perhaps Dr. Clawson pointed out. I certainly support strong parental involvement throughout the educational process, and to ensure that each child achieves their highest maximum potential.

Perhaps there is disagreement on the panel about the pervasiveness. Dr. Carey.

Dr. Carey. Pervasive?

Mr. Burns. Pervasiveness.

Dr. Carey. Of what?

Mr. Burns. As far as the excessive use of medication in our schools today.

Dr. Carey. Are you talking about pervasiveness of symptoms or of the use of the medication?

Mr. Burns. The use of the medication.

Dr. Carev. Well -

Mr. Burns. Is it a pervasive problem? Do you see it as a pervasive problem?

Dr. Carey. Yes, it is. It really is. I guess you did not hear my statement.

Mr. Burns. I did not. That is why I have to ask you. I would like to see if there is consensus. Dr. Clawson, do you see it as a pervasive problem?

Dr. Clawson. Basically, there is recent research that was published in September 2002 where an old research mentor of mine from Columbia, Dr. Peter Jensen, in 4 cities across the U.S. - in Atlanta, New Haven, Westchester and San Juan, Puerto Rico - went into the records and evaluated 1,285 children in depth using stringent criteria, and what they found was 5.1 percent of the children between the ages of 9 and 17 qualified for a diagnosis of ADHD.

Interestingly, only 12.1 percent of these children were being medicated. Okay? Out of the approximately 1,300.

Out of the 1,300, there were 8 children that were being medicated for ADHD that probably did not meet full criteria for ADHD

Mr. Burns. That was a study of a thousand in 4 locations?

Dr. Clawson. No. Four locations, a study of nearly 1,300 children. And so all I can say is the recent research shows at least in these large metropolitan areas, we are not necessarily over diagnosing or overmedicating.

If you will look at Rochester, Minnesota, the Mayo Clinic did a very detailed study and followed kids for 6 years that had tremendous access to medical care. Out of all the children that were diagnosed with ADHD, approximately two-thirds or three quarters were being medicated that had formal diagnoses. So it is hard for me to say prevalence other than what I know is out there in the research.

Mr. Burns. I will wrap up. Do you see this legislation as doing harm? Do you see any down side? You know, the objective here is to protect children.

Dr. Clawson. I think this legislation is kind of the after effect of having severe mental health shortages for children and adolescents in this country, and we are trying to legislate telling

teachers, not to say there is a problem or mention medication. My sense is, if we take this blanket approach to where children are being under diagnosed and under medicated, we will put a further pall or further barrier to potential access, although I am not - .

Mr. Burns. Is your perception that we are under diagnosing and under medicating?

Dr. Clawson. All the research that I have seen actually says that we are under diagnosing. I cannot say under medicating. There are certainly circumstances where it appears that -

Mr. Burns. How does that break out by ethnicity?

Dr. Clawson. I do not have those figures right now in front of me. There have been studies that have revealed that children of minority backgrounds are more frequently medicated.

Mr. Burns. Three times, I believe, more -

Dr. Clawson. And I will also point out that there is also indication that the less mental health resources you have available, often the higher the use of psychotropic medication.

Chairman Castle. Thank you, Mr. Burns.

Mrs. Davis.

Mrs. Davis. Thank you, Mr. Chairman, and I am glad that that issue came up, because I guess that would be a concern. I know that several years ago in San Diego when we began assessing children's medical care and the largest majority of children came to school for their health care, essentially they saw the nurse as their primary care provider, and in those situations then, kids are less likely to get the kind of help and support that they need.

I wondered, Representative Bryson, if in the Utah area, you had an opportunity to - if there had been any scientific data collected to indicate prevalence. I know that anecdotally we are all concerned about that, and I can appreciate that, especially when you have groups or classrooms in one particular school or several schools cluster that seem to indicate very high levels of children that perhaps are under medication. Were there any scientific studies that indicate what those numbers actually reveal?

Ms. Bryson. Thank you. Not to my knowledge. The only thing that we were trying to find out was how many prescriptions had been written and what amounts of these types of drugs were being prescribed. So there was not any scientific evidence. I know that just recently, although I was trying to get my hands on it before coming here, the Department of Health in Utah apparently conducted some kind of study and determined that we were at or below the national average on prescriptions of Ritalin. However, there are other drugs that are now being used as well. Were there any studies on the number of uninsured children? I am wondering if it is more or less with what the country would be. Were there larger numbers of uninsured? I guess the other question would be the perception of mental health and whether or not people believed that it was okay to

seek a mental health professional, whether that was -

Ms. Bryson. I cannot tell you that there was a study conducted, but I do not believe the perception was always appropriate to seek advice from a medical physician, a psychiatrist, or someone in the medical field. I do not think that there was any problem with that, but it came back to information and having information about the side effects of these drugs. It is a complex issue when you are a parent and it is being suggested by school personnel that you need to take your child here or there rather than these are the symptoms or this is what have seen in the behavior of your child. You know, being specific is always appreciated by parents.

Mrs. Davis. Right. No, I understand that, and I think the bottom line - I suspect that all the witnesses would agree that information to parents is the most important thing we can provide, and in a nonbiased fashion. And it surprises me having had experience with school districts that in fact the stories that you are sharing are representative of school policy, that it is actually written that a school board voted, is that correct, to do this?

Ms. Bryson. Excuse me. I am sorry. What was mentioned earlier was something about encouraging. What I was trying to say is there is nothing that is written that will indicate that they have ever made a medical diagnosis. School personnel will not admit that they have ever said, you need to take your child to a psychiatrist or your child needs to be on Ritalin, but we know that has occurred, and often.

Mrs. Davis. I guess what I am searching for as a former school board member is that there is a stated policy to suggest that, and if there is no stated policy, then I would think there would be some intervention on behalf of local officials that would basically say to school personnel that it is not appropriate and that there are resources available to help them, to support them, resources available to parents to do that.

And I think that is where we need to be sure and encourage, and perhaps the federal role is a little different in that, but I think - I was concerned because I wasn't hearing that there was anything specific that was in school policy.

Ms. Bryson. There has not been in school policy, and one of the reasons that legislation is being offered in so many states by legislators like myself is because there have been so many problems. I mean, where things are being suggested to parents. Maybe it has just gotten out of hand. I believe that if you are dealing with this issue now, it is because it has gotten totally out of hand, in that school personnel, the expectations are that have been involved. And it literally is diagnosing. When you have a little 6-year-old - there are drugs that are not recommended for kids 6 years and under. You mentioned something about some other statistics. I was trying to derive statistics in my state on those who are on Medicaid, and I looked at numbers where children 0 to 3 were on drugs and questioning why and how and what in the world would ever cause someone to put a child - a baby, a baby literally, a toddler, on drugs. It is very frightening.

Mrs. Davis. Mr. Chairman, I know that my time is up. I would just - I think in some ways it is a jurisdictional issue. I think that if, in fact, we have school districts that are "recommending," then it seems to me that there is a jurisdictional issue here whether or not school boards determine that, in

fact, that is not appropriate district policy, and there are certainly guidelines that should be adhered to. And we need to be certain that at least they are doing that, because I think that is a first step, no matter where you go, and the extent to which we need to legislate here is really a different matter, but I would certainly hope that local school boards are providing the direction and the support so that people know where the resources are, that they are out there. People can make a judgment about that as parents, and I believe totally that parents should have that decision, and, you know, honestly sometimes - there is more sophistication than others in this area, but that is not to say that parents shouldn't have this information, and there are lots of ways to provide that. And all children should have the ability to have their parents at least have good information.

Chairman Castle. Thank you, Mrs. Davis.

Ms. Woolsey.

Ms. Woolsey. When I was a little kid, my grandfather used to sit me down in a chair, and he would pay me a nickel for every minute that I did not move, and I never earned one nickel. I was in my 60s before I learned how not to move.

So I am truly, truly worried about people who are going to be just fine, little kids, and putting a label on them and giving them drugs. But I am also concerned that we are talking black and white. There is no gray in what we are talking about today. And, I mean, if a student entered the classroom with a broken arm and the parents absolutely refused to help this little kid who was in great pain, what would we do then? And I see a kid that is in - with ADHD being in great pain. But that is the real ADHD; I mean, not something because we have got boys that speak out in big classrooms that disrupt the classroom.

So I just - how are we going to get to understanding that kids have to be individuals without coercing their parents to put them on drugs? That is my fear. And I want to stop that now. I mean, I would go too far one way in order to stop that, I am so very, very concerned about it, but I know there is real need also.

So in talking to me about this, starting with you, Dr. Carey, would you also tell me why and if you think I am wrong - that there are more kids really with ADHD than there were when I was a kid, when you were a kid, when you were a kid. Is it real? I mean, is it because their parents didn't take care of themselves physically or what?

Dr. Carey. One cannot answer that question with complete certainty, but I suspect the human race has not changed very much since our childhood. I think kids used to squirm, and they just squirmed. I share your concern, and you are not going too far in saying that a great deal of normal behavior has been pathologized by people who do not know the full range of normal behavior. As I mentioned, I have been studying this for 35 years, and I see a great deal of over diagnosis of normal behavior as being such things as ADHD.

My chums in psychiatry say they are concerned about both over- and under diagnosis, but they really are concerned more about the under diagnosis. I, as a pediatrician, am more concerned about the over diagnosis, because I see a lot of kids who are depressed, who have come from

abusive homes, who come to school hungry, sleepy, and the real problem is something other than the putative brain defect which underlies ADHD. So keep up your struggle. You are not going too far

Ms. Woolsey. Dr. Clawson, do you want to respond to that?

Dr. Clawson. Could you reframe your question briefly?

Ms. Woolsey. Well, just mainly are there more children with ADHD than in the past? I mean, truly - .

Dr. Clawson. Once again, that is very difficult. I think that the field has advanced, and so our diagnostic specificity has improved over the years, and there is greater publicity and greater public education about ADHD as a diagnosis. I do not feel that at its core there are more people with ADHD than there were. I think there is perhaps an increased identification, as well as perhaps shifts in culture. I might hypothesize in terms of what we are expecting of kids, and whether there is a tolerance for squirminess or not.

I do feel that there are cases of over diagnosis, but I would say the research, including the Surgeon General's report, shows that there is massive under diagnosis. Only 1 in 5 kids with a mental illness is being treated, and these other factors that are brought up about abuse, poverty, those are very real issues, and those do not say that a diagnosis of ADHD exists or does not exist, but those are very important issues that have to be addressed as well. Unfortunately an amendment like this does not really address.

Ms. Woolsey. Well, what would this amendment do if a parent had insisted that the child be on drugs and the school new absolutely for sure that that kid didn't need to be on drugs? What happens with this amendment? It sounds to me like the teachers don't have a voice in that. Has anybody looked at it from that regard? Have you, Katherine?

Ms. Bryson. I have not, but you know the bottom line is the parent's right, and in fact, it is very unique. I have never been in a situation where someone has come forward.

Ms. Woolsey. Dr. Carey, do you have - .

Dr. Carey. That is an unusual situation, I would submit, and it is the parent's decision, and it is the school's responsibility to do something only if the use of drugs is impairing the kid's school function.

Ms. Woolsey. Okay. Well, Dr. Clawson.

Dr. Clawson. I would agree that if the child is being impaired somehow, it is a decision that is made collaboratively with the parents and the physician, and we cannot let the physicians abdicate their responsibility by throwing the burden on the schools.

Ms. Woolsey. We may do another round. Right?

Chairman Castle. Well, we may, may not. We will have a discussion about that.

Thank you, Ms. Woolsey.

Mr. Wilson.

Mr. Wilson. Thank you, Mr. Chairman. I would like to thank all three of you for being here today, and I also want to congratulate the freshman Congressman from Georgia, Mr. Burns, for proposing this, and he has just been so proactive here in Congress. We are really proud of his service.

This is an issue that is important to me. I have had two sons in resource classes. This has been a big week, and one of them will be sworn in to the Bar Association. I know that the Congressman thinks we need more Congressmen. And then the other will take concluding exams on Friday. I am confident he will continue his dean's list position in college as a senior. So it is amazing what can be done, and our family is very appreciative. But I am concerned about this issue. For all three of you, I would like to know what your thoughts are on expanding the scope of H.R. 1170, to include other drugs under the Controlled Substances Act, beginning with Representative Bryson.

Ms. Bryson. I would love to see that occur. I think that is applaudable. I think that it needs to happen, and I appreciate such consideration. I probably could go on, but I think those who have much more knowledge in the medical arena could speak to this as well.

Dr. Carey. Well, I guess Dr. Clawson should be the one with the answer here, but I would say that there are other drugs being given now. The second most common diagnosis now seems to be bipolar disorder, which seems to be getting hooked onto a great variety of kids, and they are getting various medications for that. Pretty soon teachers will be starting to tell parents that their kids have bipolar disorder and they could be getting medicated.

So by extension, it seems to me that, yes, it should be extended to other drugs as well.

Dr. Clawson. When you mentioned controlled substances, that is a fairly formal category of drugs that are felt to have physiologic, addictive, and abuse potential. So I am a little confused by your question in terms of drugs being controlled. This goes to the same issue. Only one fifth of children in the country are being treated for mental illnesses. There are a lot of untreated mental illnesses. Psychotropic medications are used in certain mental illnesses or at certain levels of severity.

My argument would be similar. I do not think teachers really have the training or the authority to determine whether students need this drug or that drug. Once again, we are trying to limit the collaborative process that goes on where teachers are providing information to parents who then decide on their own whether to seek medical consultation, and then collaborate with and decide in conjunction with their physician whether to try psychotropic medication.

So I would not support that for the same reasons that I cited earlier.

Mr. Wilson. Thank you very much, and, again, Representative Bryson, we really appreciate you being so active in this and coming all the way to Washington to educate us.

Do you have any ideas on how to work with teachers, doctors, and parents, to reduce the emphasis of medication as the first answer and instead look to other ways to work with the child to address the issue?

Ms. Bryson. Thank you. I mention that I myself had taught school some years ago, and I kept thinking there was never any mention of medication. There was never anything. It was always classroom intervention. I mean, there were methods to deal with behavioral situations. In fact, sitting here, I thought about what we would do if there were not any types of medication out there, which we seem to use so freely. Who would have thought 30 years ago that we would hear the term Ritalin and that 6 to 8 million kids would be on this particular drug or drugs like it? But are there other issues here? I think we need to look more carefully at when we do any kind of diagnosis of kids. When we are looking at their problems as far as reading or math or the areas that are of real concern.

I am not a physician, but I know from my experience as a teacher, there were things that I felt could be implemented in the classroom, and I am sure that with some consideration, that this again - I mean, there are interventions you look at when you have behavioral problems in a classroom, and communication with a parent such as writing letters. In our state trying to just suggest that communication done through letters was not amenable to our school boards. It was almost like if you make a commitment to acknowledge that there might be a problem, that that was unacceptable. It was a very strange situation and very uncomfortable for me.

But coming back, I think that there have to be other interventions, and maybe even the mental health community can look at this. But I do not believe that in all these cases that we just put these kids on drugs.

Mr. Wilson. Thank you, and I know that my wife who is a schoolteacher would agree with you. Thank you very much. I now yield the balance of my time.

Chairman Castle. Thank you, Mr. Wilson.

Mr. Van Hollen is next.

Mr. Van Hollen. Thank you, Mr. Chairman, and I want to thank Congressman Burns for the hearing as well, and Mr. Chairman as well for the opportunity.

I just want to make sure I understand the - we have got the legislation, but then there seems to be a broader debate beyond the legislation as to the prevalence of ADHD and the use of Ritalin, because the legislation I think from the testimony on all sides, it is clear that no one thinks that teachers should be prescribing Ritalin or saying that we should require kids as a condition to going to school to take Ritalin. I think the general consensus I hear all of you say is this is something that

belongs in the medical practice and should be diagnosed by a physician.

But I would ask you, Representative, what your sense is with respect to whether or not there is a legitimate diagnosis for ADHD and whether you believe that it is appropriate in certain cases to prescribe Ritalin for that.

Dr. Carey. Perhaps you missed what I said earlier. I said that there are a small percentage of children who undeniably are so overactive or inattentive, that they are hard for anybody to manage. But I would put that about 1 or 2 percent. The official psychiatric view is 3 to 5 percent, kids who really have a problem, where it is the inattentiveness or the activity that are the problem.

Now, this has become a convenient wastebasket into which all other problematic kids can be thrown. The kids who are having trouble learning, who are difficult to get along with, who are hungry, who are sleepy and so on. It certainly should not go any higher than 5 percent, and yet it does go quite a bit higher than that. As I mentioned, 17 percent in a study in Norfolk, Virginia, and I heard anecdotally recently that in a certain elite private school in New York City, it is 40 percent.

Mr. Van Hollen. And Representative Bryson, do you have an opinion on this issue?

Ms. Bryson. I would agree. I would have to agree wholeheartedly with Dr. Carey.

Mr. Van Hollen. Well, one of the issues here - we are trying to get to the relationship between a schoolteacher who has children in the classroom for a good part of the day obviously and the parents and what that appropriate relationship is.

If you are a parent and you seek out the advice of a teacher, you say, how is my child doing in your classroom, do you believe it is inappropriate for the teacher to offer an opinion on that if part of that opinion is, you know, he is acting like other kids who have this ADHD.

Ms. Bryson. As I mentioned, I taught some years ago. I always felt that it was my responsibility to convey to the parent what was happening, at least quarterly, if not more often by meeting with parents and talking with them. But I think it is important is to convey exactly what you are observing, rather than that this child over here takes Ritalin, and, you know, your son looks just like him. Well, maybe Johnny over here should not have even been on Ritalin, and so that is a false assumption.

I believe that we need to be very puristic about this, and if we see a child and, yes, he may have problems in reading or, yes, he may be out on the playground and at times he seems a little bit aggressive. However, I think those are things that we convey and communicate to the parents and let the parents who deal with that child a lot more than we do - I mean, than teacher does, makes those decisions, but at least present the information.

I think parents, ultimately, love that child. No matter what anyone says, I believe they do love their children, and they want to see their child succeed. As a mother of 6, I like information so that my child can strive and do their best.

Mr. Van Hollen. I understand. I guess I am trying to get at the relationship between the parent, who I agree loves the child who actually seeks out information from a teacher, and whether or not what kind of limitations we may be putting on teachers that we may think are actually appropriate opinions. I would be interested, Dr. Clawson - you actually deal with this issue on a regular basis. What do you think the impact of something like this could have on that relationship?

Dr. Clawson. Well, I think as I testified to earlier, I think once again we are putting further restrictions on teachers. Teachers have a number of demands and restrictions for documentation, what they can and cannot say. And once again, we are telling them you can make a conclusion. I have had many teachers make similar conclusions but couch it and say, listen, I have had other kids respond to this. I do not know, but my opinion is you should have this investigated further by a medical professional.

It is not necessarily wrong. Every time a teacher voices an opinion, I would not say that that is coercion. That is expressing an opinion which parents can then take and investigate and make a decision, you know, as parents of this child.

Mr. Van Hollen. Right. Ultimately, any prescription has to be made and diagnosed by a medical -

Dr. Clawson. Right. Teachers recommend vision screenings. They recommend hearing screenings if they have concern regarding a child's general health in the classroom. We want them to be able to do that, and in the same way, I think we would want to be able to allow them to feel free to make recommendations or suggestions regarding issues around a child's emotional and mental well-being.

Mr. Van Hollen. Right. I think everyone would agree we don't want teachers coercing the parent, but on the other hand it seems to me the parent, as Representative Bryson, you said, I mean, they should have all the information. And they can choose to disregard the teacher's opinion, but I guess my question is why would we want to - obviously we don't want a teacher saying you have to put your kid on Ritalin and making the diagnosis in order to come to school, but if the parent were to seek out the opinion of a teacher with the obvious understanding the teacher can't make the prescription, it is going to be a doctor, why would we prohibit a teacher from offering an opinion in response to a question from parent? Representative - I was asking Representative Bryson.

Ms. Bryson. I was listening to you. I was just thinking of what you really want as parent is to know what is happening to your child, but in some cases you do not want to discourage a teacher from communicating with you, but you also do not want them to act as the physician.

Mr. Van Hollen. I think we are in agreement on the fact that we don't want the teacher to act as a physician. My concern is that we somehow prohibit a teacher from responding - providing their opinion in response to a request from a parent. I mean, I may have my child at home and I have been observing the child, and I may have some concerns and I want to know what is going on in the classroom, and I want to ask the teacher about that and ask that teacher's opinion with respect to it.

I can disregard that opinion. I mean, I guess why are we afraid of the - I understand why we are we would be concerned about any teacher requiring a parent to put a kid on Ritalin, but why are we afraid of just having the opinion of a teacher reach the parent with respect to this?

Ms. Bryson. It has been my experience that what you are suggesting is probably not what is occurring as frequently and what is happening is just the opposite, is where the teacher is approaching the parent and suggesting that there are some problems. From there sometimes it goes as far as even suggesting that Johnny in the classroom is on Ritalin, and maybe that will help your son. And that is the direction I guess that when I have been approached as a legislator, that is what I have heard.

Mr. Van Hollen. Thank you, Mr. Chairman. If I could just - if I could have something submitted for the record. It is a statement by Audrey Spolarich, who is the Chair of the Coalition of Children's Health which outlines a number of opinions on this whole issue and some concerns.

Chairman Castle. Without objection, the document is submitted for the record as accepted [SEE APPENDIX G].

Chairman Castle. We are going to go to Mrs. Musgrave at this point.

Dr. Carey, did you have something you wanted to say on that before we went to the next questioner? Your light was on is the reason I ask that.

Dr. Carey. Well, hopefully parents will understand that teachers are not diagnosticians and they should not be asking them in the first place, and teachers should have the sense not to give diagnosis when they are asked. But we cannot stop that from happening, can we? Or can we?

Mr. Van Hollen. I guess the issue is - and just getting back to the distinction between something I think everyone should agree on, which is that teachers shouldn't be saying-playing the role of doctors and saying, you know, your kid can't come to school if they are not on Ritalin. I am sure there is a big debate to the extent that is happening. Some people say it is happening a lot, some people say it is not. But between that issue and a parent who is genuinely concerned and is seeking information possibly from a teacher in a classroom who is observing their child day in and day out and wanting to get the opinion of the teacher and whether this would have any impact on the ability of the teacher to express his or her opinion.

The words of it don't require it, but-because it says they can't require them. The bill is narrow in that sense. It says, you know, prohibiting school personnel from requiring a child to obtain a prescription. My question is, is part of your - is it your opinion, though, that it is - I am trying to get to the broader issue here. Is it your opinion that it would be inappropriate for the teacher to offer an opinion in response to a question from the parent, whatever that opinion is, and understanding the parent can reject it?

Chairman Castle. Can you respond briefly, Dr. Carey? We need to go -

Dr. Carey. I would rather the teacher not respond, but I do not know how I am going to stop it.

Chairman Castle. Mrs. Musgrave.

Mrs. Musgrave. Before I speak, Mr. Chairman, I would like to yield a minute to Mr. Burns.

Mr. Burns. I thank the lady from Colorado. Just a point of clarification, and I appreciate my friend and colleague Mr. Van Hollen. This is a very simple bill. It is very specific. It does not in any way prohibit input or discussion or dialogue between teachers, parents, and physicians. It does attempt to put the decision-making process in the hands of the trained medical professional and the parent, and I think that is very important. I yield back the balance. Thank you.

Mrs. Musgrave. Thank you. Coming from Colorado, you are aware of Columbine, the stain that will forever be on our state. The school shooters were on Luvox and Prozac. And as I understand this, they would not be prohibited from school coercion under this particular bill. But as we consider those kinds of drugs and the behavior of those students, it is alarming to me, to say the least. And what I am wondering about today, I would like to particularly address the doctors here, what do we know about the long-term effects of drugs like Ritalin or Adderall?

Dr. Clawson. Essentially stimulants, amphetamines have been used longer than almost any other drug available that has been used since 1937. Over the last 30 years, stimulants, particularly methylphenidate and dextroamphetamine are some of the best studied drugs of any drug available to humans. They have been found to be generally safe and well tolerated. Like any medication, including over-the-counter medications, they can have adverse consequences, and that is why they require a prescription and medical management and supervision. But -

Mrs. Musgrave. If I may ask, how about experience or evidence in regard to use with young children?

Dr. Clawson. To my knowledge, there have not been exhaustive longitudinal studies where, for instance, a young child would be placed on a stimulant then followed for 20 or 30 years, although there is data amassing to show that there are not long-term adverse effects. I do not think that that is an absolute. Any drug you give a child can have a long-term adverse consequence, because we do not know all of the potentials, but the fact that we have been researching particularly stimulants for the last 30 years gives us a tremendous amount of medical research data to support that dramatic adverse consequences have not been reported or found with these medications, other than well-described specific cases where there are adverse events, just like any other medication. You can get this with Benadryl, aspirin, or many of these things. Any medication can have an adverse outcome.

Mrs. Musgrave. Yes.

Dr. Carey. There are some side effects from Ritalin and such drugs, but as Dr. Clawson says, they are fortunately relatively minor in the studies that have been done so far.

What I find most disturbing is the fact that these drugs are now being used in preschool children, and as somebody said, even as young as infants.

Dr. Carey. At a time when the brain is still completing itself, laying down myelin and developing further, we have no idea what that is going to do to the development of the brain.

And there is a study going on now, but I am very apprehensive about that, and I hope that it will not get to be a common process. It is very hard to know in little kids what is abnormal behavior and what is just a feisty kid.

So I have to say that we do not really know very much about little children.

Mrs. Musgrave. Well, I have been concerned with the way, many times, that we think that all children should behave in the same way.

I appreciate your remarks. When you have 27 little people in a room and you think that they should all be compliant and acting in a certain way, I think we are making a big mistake.

Representative Bryson, did you find out any evidence, when you were working on your legislation, in regard to documenting how students performed, for instance after they have been put on Ritalin or a similar drug, in elementary school? Does anyone know what their academic performance is in 2 years, 4 years, or 6 years? Do we know if there is still a problem for the teacher in the classroom? Have we followed these students enough to see what their behavior is 2, 4, or 6 years down the road?

Ms. Bryson. I think we would all be curious to see that. To my knowledge, there has not been any long-term study on this. I would like to have seen it. The only thing I had a chance to hear was actually from students. As I was working on this legislation, they looked at quite a few substitutes, and there were a number of people, college students, who came forward and spoke with me and testified. But there were personal situations where they said they were placed on Ritalin, but their reading skills did not improve or the skills in other areas did not improve.

Yes, they were compliant, but as far as any studies of anything that was documented, I have not seen anything.

Mrs. Musgrave. Well, I just wanted to end up talking about how vulnerable a mother feels, particularly when you have your first child in school. You have your heart vested in this student, your first-born, when you go in to consult with the teacher.

I could put myself in that place very easily because the older of our two sons, the eldest of our four children, was not learning to read in first grade; and he was not hyperactive, but he was having problems. I still remember what I felt like when I went before that teacher. I had a college education; I probably had a little more self-confidence than some, but I went in there wanting to find a solution for Chad's reading problem. And I talked to that teacher. I can now put myself in the place of mothers and fathers that go in when their child is not succeeding and realize how

impressionable they are to the comment that a teacher would make.

I have been a teacher. I know the big responsibility that teachers have.

And I would just like to commend Mr. Burns, because I think you have crafted a bill here that walks the fine line. Yes, we want to be respectful of our educators. We want them to be able to communicate with parents. But we do not want them going over the line where they would push a parent into doing something that they thought was best for their child, whereas this teacher really does not have the capacity to be giving this kind of information.

And so I want to stand up for those moms and dads that want the best for their children and are seeking advice from the teacher. And I want that teacher who is very qualified in that educational arena to give educational advice, and I do not want drugs to be our first solution to very complex problems.

And I do not want all of our kids to have to be the same because they are unique and precious individuals, and we need to look at them as individuals.

Chairman Castle. Well, thank you, Mrs. Musgrave, I would like to thank the witnesses for being here today. I would like to thank all the members who participated. We tried to be generous of the time in this round of questions so that everybody could get their questions in.

I was talking with Ms. Woolsey, and we both sort of admitted that this is a hearing that probably raises as many questions as it answers. That is not bad. That shows something about insight, about all of you. I happen to be supportive of the legislation at hand, but obviously we do need to be careful when we legislate in these areas; and I think we have helped to shed some light on that. We appreciate very much all of you being here.

Let me turn to Ms. Woolsey and see if she has any closing comments.

Ms. Woolsey. I do. Thank you.

I think we all have to look at the legislation to make sure there is some gray in it, that it is not black and white, because every person and all of these little kids are, to some degree, between one side or the other on this, unless they are severely ill. So I want to look at it from that regard.

And I want to protect children from being drugged because they are being children. And I will say that over and over.

Thank you.

Chairman Castle. Mr. Burns, as the sponsor did you wish to make a brief closing comment?

Mr. Burns. I would like to thank the panel for your input, and I thank the committee for holding the hearing. I think we are on the right track. I believe we are making progress. Our primary goals are the same on both sides of the aisle; and our goal and our objective is to protect the children of

America and make sure they receive a quality education without the use of drugs, if at all possible. And I support that.

Thank you, Mr. Chairman.

Chairman Castle. Thanks again, everybody. And with that, we stand adjourned.

[Whereupon, at 3:45 p.m., the subcommittee was adjourned.]

APPENDIX A – WRITTEN OPENING STATEMENT OF CHAIRMAN MICHAEL N. CASTLE, SUBCOMMITTEE ON EDUCATION REFORM, COMMITTEE ON EDUCATION AND THE WORKFORCE, U.S. HOUSE OF REPRESENATIVES, WASHINGTON, D.C.

Statement of Chairman Michael N. Castle Subcommittee on Education Reform Hearing on Child Medication Safety Act of 2003

May 6, 2003

Good morning. Let me begin by welcoming our guests, witnesses, and members of this Committee. Thank you all for being here today. I appreciate the opportunity to discuss the Child Medication Safety Act and look forward to your comments and recommendations.

On September 29, 2000, the Committee on Education and the Workforce held a hearing entitled, "Behavioral Drugs in Schools: Questions and Concerns." Witnesses testified about the use of psychotropic drugs by youth. In September 2002, the House Committee on Government Reform held a hearing to explore the use of psychotropic drugs in our nation's schools. They found that, in many cases, parents are being required by school officials to place their child on a psychotropic medication such as Ritalin or Adderall to allow them to remain in the classroom.

Psychotropic drugs, when prescribed and monitored by a licensed medical practitioner, ican be helpful for individuals properly diagnosed with attention deficit disorder (ADD) or attention deficit-hyperactivity disorder (ADHD). These medications can help to control the symptoms of their disease so that these individuals can function.

However, these drugs have the potential for serious harm and abuse. They are listed on Schedule II of the Controlled Substances Act. Drugs are placed on Schedule II when the drug has a high potential for abuse or may lead to severe psychological or physical dependence."

Schools are an important source of information for families and we encourage an open line of communication between schools and families. Parents, however, should never be forced to decide between getting their child into school and keeping their child off of potentially harmful drugs. School personnel should never presume to know the medication needs of a child. Only medical doctors have the ability to determine if a prescription for a psychotropic drug is physically appropriate for a child.

To address this significant problem, my colleague on this Committee – Representative Max Burns of Georgia – introduced H.R. 1170, the Child Medication Safety Act of 2003. The goal of this Act is straightforward. It would require States to establish policies and procedures prohibiting school personnel from requiring a child to take medication in order to attend school. This would prevent parents from being forced into making decisions about their child's health under duress from school officials.

We look forward today to hearing from our witnesses on the benefits and dangers of psychotropic drugs and on efforts by parents and state legislatures to address the coercion issue.

With that, I would yield to my colleague from California, Mrs. Woolsey for any opening statement that she may have.

APPENDIX B – WRITTEN OPENING STATEMENT OF RANKING MEMBER LYNN C. WOOLSEY, SUBCOMMITTEE ON EDUCATION REFORM, COMMITTEE ON EDUCATION AND THE WORKFORCE, U.S. HOUSE OF REPRESENATIVES, WASHINGTON, D.C.

REP. LYNN WOOLSEY OPENING STATEMENT SUBCOMMITTEE ON EDUCATION REFORM HEARING ON "PROTECTING CHILDREN: THE USE OF MEDICATION IN OUR NATION'S SCHOOLS AND H.R. 1170, CHILD MEDICATION SAFETY ACT OF 2003"

Tuesday, May 6, 2003

THANK YOU, MR. CHAIRMAN.

I'VE SAID BEFORE WHEN THE SUBJECT OF RITALIN HAS COME UP BEFORE THIS COMMITTEE, I RAISED FOUR CHILDREN AND I AM SURE THAT RITALIN WOULD HAVE BEEN SUGGESTED FOR AT LEAST TWO OF THEM IF THEY WERE IN SCHOOL TODAY.

AND I HAVE CONCERNS ABOUT THAT, BECAUSE I THINK THAT WE ARE BLURRING THE LINE BETWEEN THE BEHAVIOR OF AN ACTIVE, HIGH-SPIRITED CHILD AND A CHILD WITH A DISABILITY.

THIS IS NOT TO SUGGEST, HOWEVER, THAT ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD) IS NOT A VERY REAL DISABILITY FOR MANY CHILDREN. ADHD ROBS SO MANY CHILDREN AND THEIR PARENTS OF THE PLEASURES OF CHILDHOOD AND FAMILY. THE CHILDREN ARE LABELLED AS "BAD" FOR THINGS THAT THEY CAN'T CONTROL. THE PARENTS FIND THEMSELVES FRUSTRATED AND OFTEN ANGRY.

PROPERLY PRESCRIBED, AND COUPLED WITH OTHER THERAPIES, RITALIN HAS ENABLED THOUSANDS OF CHILDREN WITH ADHD TO ACHIEVE AT SCHOOL AND BOND WITH THEIR FAMILY AT HOME. THE SUCCESS OF RITALIN HAS BEEN WELL DOCUMENTED AND IT IS AN IMPORTANT RESOURCE THAT MEDICAL PROFESSIONALS SHOULD BE ABLE TO CONSIDER WHEN PLANNING TREATMENT FOR A CHILD WITH ADHD.

HOWEVER, THE GROWING INCREASE IN THE MANUFACTURE AND PRESCRIPTION OF RITALIN IS A CAUSE FOR CONCERN. THE DECISION TO TREAT A CHILD WITH ANY DRUG, BUT CERTAINLY A STIMULANT LIKE RITALIN, SHOULD BE MADE VERY CAREFULLY AND ONLY AFTER COMPREHENSIVE EVALUATION AND DIAGNOSIS. IT IS CRUCIAL THAT PARENTS BE VERY WELL INFORMED ABOUT RITALIN – BOTH ITS POSSIBLE SUCCESSES AND POSSIBLE SIDE EFFECTS – IF IT IS BEING CONSIDERED FOR THEIR CHILD. AND, IT GOES WITHOUT SAYING, PARENTS SHOULD HAVE THE FINAL WORD IN DECIDING WHETHER OR NOT THEIR CHILD SHOULD TAKE RITALIN.

THIS IS SUCH AN IMPORTANT ISSUE AND I LOOK FORWARD TO DISCUSSING IT WITH OUR PANEL AND THE SUBCOMMITTEE MEMBERS HERE TODAY.

APPENDIX C – WRITTEN STATEMENT OF HON. KATHERINE BRYSON, STATE REPRESENTATIVE, UTAH HOUSE OF REPRESENTATIVES, OREM, UTAH.

FOR THE COMMITTEE ON EDUCATION AND WORKFORCE Testimony from Katherine Bryson, Utah State Legislator, May 6, 2003

Thank you for the opportunity to speak about this grave national issue and let me start with commending the Committee for recognizing that the coercive use of psychotropic drugs on children is *not* a few "isolated" incidents, but is impacting hundreds, if not thousands, of families across America.

While Utah was once the Ritalin capital of America, this Schedule II drug seems to have dropped to a national average level now in our State. However, in the wake of raised public awareness about the risks of Ritalin, other stimulants like Adderall and the amphetamine Dexadrine are deluging the child psychiatric market in its place. In fact, Adderall now comprises 32% of the national stimulant market, with 6.1 million prescriptions in 2000 and \$248 million in sales.

Yet, this drug has already been cited in a North Dakota criminal judgment in 1999 where a young father was not held criminally responsible for the murder of his 5-week-old daughter because he was in a psychotic state caused by Adderall. Psychiatrists testified that the drug induced the psychotic state causing delusions.

There are other drugs, not covered by Schedule II of the Controlled Substances Act, that are also forced onto children, including Cylert, a Schedule IV drug, and antidepressants that are not scheduled at all. Zoloft and Paxil are among the group of new antidepressants that, in 1999, were prescribed to 1.7 million children. In fact, between 1995 and 1999, there was a 19-fold increase in 2 - 19 year olds prescribed these drugs.

A FOX National News series last November found that a person taking Paxil is 8 times more likely to attempt or commit suicide than if taking a placebo. More than half of the last 12 school shootings have been committed by teenagers taking psychotropic drucs.

Meanwhile, school personnel faced with children who often have not been properly taught to read, who may be coming to school on a breakfast of sugar or no breakfast at all, who could be affected by lead, mercury or other toxic substances—a plethora of explainable reasons—are assessing them in the classroom as having a "learning disorder" or Attention Deficit Hyperactivity Disorder (ADHD). From here, parents are being coerced into drugging their child with threats of the child's expulsion or charges of medical neglect by Child Protective Services against the parents who refuse to give or take their child off a psychiatric drug.

Parents are losing their right to choose. They are being told that ADHD is a "neurobiological" disorder when even the Surgeon General's 1999 report on mental health cannot confirm this. They are being denied access to tutoring or additional educational services for the sake of a "quick fix" drug like Ritalin that some studies say is more potent than cocaine.

Often, once the child is medicated, the various side effects associated with the drug, and which I have found were too often not disclosed to the parents when they were first given the prescription, become apparent. The child may have difficulties sleeping, eating; he may have stomach problems and may be irritable. Worse yet, when withdrawing from the drug he may become so emotionally disturbed as to feel suicidal. While the parents may want to take the child off the drug at this point, they are too afraid of the implied consequences and feel powerless.

The President's Commission on Excellence in Special Education also reported that 40 percent of children labeled with "learning disorders" were so labeled simply because they had not been taught to read. Yet through Special Education and public schools generally, we allow children to be forced onto powerful and, at times, addictive psychotropic drugs for this misidentification.

While we spend over \$50 billion on the War on Drugs, we are allowing our teachers to be used as mental health clinicians diagnosing learning problems as "disorders" and "diseases" and forcing this belief on parents.

We must learn from the tragic stories that parents are coming forward with. We must learn from the Columbine High School Shooting, where teen killer Eric Harris, was taking a violence-inducing antidrepssant at the time of the crime. In 1999, the Colorado State Board of Education sent us all a message when it passed a Resolution calling for academic rather than drug solutions to behavioral and learning problems in the classroom.

I realized the gravity of the situation after being contacted by many parents in Utah and hearing what I can only describe as horror stories, some of which I have attached to my written testimony for your review. With Utah children comprising a quarter of our total population, the need for protection was more than apparent. Subsequently, I ran a bill in 2002 to prohibit school personnel from pressuring parents into drugging their children. The Utah legislature recognized the need for this protection and passed the bill by an overwhelming majority of 89 in favor with only seven dissenting votes.

Tragically, the Governor of our State failed to listen to the needs of our families. For reasons that can only be speculated upon at this time, he vetoed the bill, thus condoning the coercive drugging of Utah's future generation.

Unless we, as legislators, do something about this coercive situation and using medication instead of education, we become accomplices to what many see as a drug-pushing epidemic sweeping across our nation's schools.

I support HR 1170, but believe the Committee would be remiss in not broadening this to include all prescribed psychotropic substances. The bill is not just necessary, it is absolutely vital.

H.B. 123 Enrolled

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MEDICAL RECOMMENDATIONS FOR

CHILDREN

2002 GENERAL SESSION

STATE OF UTAH

Sponsor: Katherine M. Bryson

This act modifies the State System of Public Education code and the Judicial Code by prohibiting school personnel from making certain medical recommendations for a

including the use of psychotropic drugs. This act provides that the Division of Child and Family Services may not initiate an investigation or remove a minor from the custody

parent on the basis of the refusal of the parent to consent to the administration of a psychotropic drug to a child, or to consent to certain treatments or evaluations of the

This act provides a coordination clause.

This act affects sections of Utah Code Annotated 1953 as follows:

AMENDS:

78-3a-301 (Subsection (1)(m) is repealed 07/01/02), as last amended by Chapters 153 and 250, Laws of Utah 2001 ENACTS:

53A-11-602, Utah Code Annotated 1953

Be it enacted by the Legislature of the state of Utah:

Section 1. Section 53A-11-602 is enacted to read:

53A-11-602. Prohibited recommendations -- Psychotropic drugs -- Exceptions --Penalties.

(1) As used in this section:

(a) "school" means a public school;

(b) "federal education law" means:

(i) 20 U.S.C. Sec. 1401 et seq.; (ii) 20 U.S.C. Sec. 7101 et seq.;

(iii) 29 U.S.C. Sec. 794; and

(iv) 42 U.S.C. Sec. 12101 et seq.

(2) Except as provided in Subsection (4) or (5), school personnel may not:

(a) recommend to a parent or guardian that a child take or continue to take a psychotropic drug as a condition for attending school;

(b) require that a child take or continue to take a psychotropic drug as a condition for attending school;

(c) recommend that a parent or guardian seek or use any of the following:

(i) the administration of any psychotropic medication to a child;

(ii) a psychiatric or psychological treatment for a child; or

(iii) a psychiatric evaluation of a child:

(d) conduct a psychiatric or behavioral health evaluation of a child;

(e) recommend a specific licensed physician, psychologist, or any other health specialist to a parent or guardian for a child; or

(f) make a child abuse or neglect report to authorities, including the Division of Child and Family Services, solely on the basis that a parent or guardian refuses to consent to:

(a) the administration of a psychotropic drug to a child;

(b) a psychiatric, psychological, or behavioral treatment for a child; or

(c) a psychiatric or behavioral health evaluation of a child.

(3) Nothing in this section may be construed to restrict school personnel from:

(a) communicating information between school personnel regarding a child; (b) informing a child's parent or guardian of a perceived behavioral problem of the child, provided that:

(i) an assertion or recommendation is not made in violation of Subsection (2); and (ii) an attempt is not made to denigrate, criticize, or punish a parent, guardian, or child

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a decision made by the parent or guardian for the child to take, not take, or discontinue to

psychotropic drug; or

(c) exercising their authority relating to the placement within the school or readmission of a child who may be or has been suspended or expelled for a violation of Section 53A-11-

<u>904 .</u>

for

(4) Notwithstanding Subsections (2)(c) and (d), a mental health professional acting in

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accordance with Title 58, Chapter 60, Mental Health Professional Practice Act or licensed

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the State Board of Education, working within the school system may, for the sole purpose of complying with federal education law:

(a) recommend, but not require, a psychiatric or behavioral health evaluation of a child.
(b) recommend, but not require, psychiatric, psychological, or behavioral treatment for a child; and

(c) conduct a psychiatric or behavioral health evaluation of a child with the consent of the child's parent or guardian.

(5) Notwithstanding Subsection (2)(e), a school district may make available to an

<u>interested</u>

parent or guardian a list of community resources, which may include mental health services, provided that the list conspicuously states the following:

"This list is provided as a resource to you. The school neither recommends nor requires

<u>that</u>

you use this list or any of the services provided in it. It is for you to decide what services, if

any, to access and from whom you wish to obtain them." (6) A local school board shall adopt a policy that indicates that a violation of this section <u>is</u> cause for disciplinary action under Section 53A-8-104. Section 2. Section 78-3a-301 (Subsection (1)(m) is repealed 07/01/02) is amended to read: 78-3a-301 (Subsection (1)(m) is repealed 07/01/02). Removing a child from his home -- Grounds for removal -- Exigent circumstances. (1) The Division of Child and Family Services may not remove a child from the custody of his natural parent unless the division complies with the provisions of Title 62A, Chapter 4a, Child and Family Services, including Subsections 62A-4a-103 (2)(b) and 62A-4a-201 (3), and unless there is substantial cause to believe that any one of the following exist: (a) there is a substantial danger to the physical health or safety of the minor and the minor's physical health or safety may not be protected without removing him from his parent's custody. If a minor has previously been adjudicated as abused, neglected, or dependent, and a subsequent incident of abuse, neglect, or dependency has occurred involving the same alleged abuser or under similar circumstance as the previous abuse, that fact constitutes prima facie evidence that the child - 3 cannot safely remain in the custody of his parent; (b) a parent engages in or threatens the child with unreasonable conduct that causes the minor to suffer emotional damage and there are no reasonable means available by which the minor's emotional health may be protected without removing the minor from the custody of his parent; (c) (i) the minor or another minor residing in the same household has been physically or sexually abused, or is deemed to be at substantial risk of being physically or sexually abused, by a parent, a member of the parent's household, or other person known to the parent. (ii) For purposes of this Subsection (1)(c), another minor residing in the same household may not be removed from the home unless that minor is deemed to be at substantial risk of being physically or sexually abused as described in Subsection (1)(c)(i) or (iii). (iii) If a parent has received actual notice that physical or sexual abuse by a person known to the parent has occurred, and there is evidence that the parent failed to protect the child by

allowing

the child to be in the physical presence of the alleged abuser, that fact constitutes prima facie evidence that the child is at substantial risk of being physically or sexually abused;

(d) the parent is unwilling to have physical custody of the child;

(e) the minor has been left without any provision for his support;

(f) a parent who has been incarcerated or institutionalized has not or cannot arrange for

safe

and appropriate care for the minor;

(g) a relative or other adult custodian with whom the minor has been left by the parent is unwilling or unable to provide care or support for the minor, the whereabouts of the parent

are

unknown, and reasonable efforts to locate him have been unsuccessful;

- (h) the minor is in immediate need of urgent medical care;
- (i) (i) a parent's actions, omissions, or habitual action create an environment that poses a threat to the child's health or safety; or
- (ii) a parent's action in leaving a child unattended would reasonably pose a threat to the child's health or safety;
 - (j) (i) the minor or another minor residing in the same household has been neglected; and
 - (ii) for purposes of Subsection (j)(i), another minor residing in the same household may

not

- 4 -

be removed unless that minor is deemed to be at substantial risk of being neglected;

- (k) an infant has been abandoned, as defined in Section 78-3a-313.5;
- (l) the parent, or an adult residing in the same household as the parent, has been charged or arrested pursuant to Title 58, Chapter 37d, Clandestine Drug Lab Act, and any clandestine

laboratory where the

operation, as defined in Section 58-37d-3, was located in the residence or on the property

child resided; or

- (m) the child's welfare is otherwise endangered, as documented by the caseworker. This Subsection (1)(m) is repealed on July 1, 2002 unless further authorized by the Legislature.
- (2) The Division of Child and Family Services may not remove a minor from the custody of his parent solely on the basis of educational neglect.
- (3) The Division of Child and Family Services may not remove a minor from the custody of his parent solely on the basis of mental illness of the parent in the absence of one of the

factors

described in Subsection (1).

(4) The Division of Child and Family Services may not initiate an investigation or remove a minor from the custody of his parent on the basis of the refusal of the parent solely to

consent to:

(a) the administration of a psychotropic drug to a child:

(b) a psychiatric, psychological, or behavioral treatment for a child; or

(c) a psychiatric or behavioral health evaluation of a child.

[(4)] (5) The Division of Child and Family Services shall comply with the provisions of Section 62A-4a-202.1 in effecting removal of a child pursuant to this section.

[(5)] (a) A minor removed from the custody of his natural parent under this section

may

minor is

not be placed or kept in a secure detention facility pending court proceedings unless the

detainable based on guidelines promulgated by the Division of Youth Corrections.

(b) A minor removed from the custody of his natural parent but who does not require physical restriction shall be given temporary care in:

- (i) a shelter facility; or
- (ii) an emergency kinship placement in accordance with Section 62A-4a-209.

Section 3. Coordination clause.

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	If this bill and H.B. 295 both pass, it is the intent of the Legislature that the Office of Legislative Research and General Counsel shall make the following changes in preparing
<u>the</u>	
	database for publication:
	(1) Subsection 78-3a-301(4) shall be amended to read as follows:
	"(4) A court may not remove a minor from the custody of the minor's parent or guardian
	solely on the basis of the refusal of the parent or guardian to consent to:
	(a) the administration of a psychotropic drug to a child;
	(b) a psychiatric, psychological, or behavioral treatment for a child; or
	(c) a psychiatric or behavioral health evaluation of a child."
	(2) Subsection 78-3a-301 (4) in H.B. 295 shall be renumbered as Subsection 78-3a-301
(E)	(2) Buosection 76-30-301 (4) in 11.B. 223 state of renumbered as Buosection 76-30-301
<u>(5).</u>	
	(3) Subsection 78-3a-301 (5) in H.B. 295 shall be renumbered as Subsection 78-3a-301
<u>(6).</u>	
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[Bill Documents][Bills Directory]

January 27, 2002

Dear Legislators,

I wanted to share my story with you so that you could see why I fully support representative Katherine Bryson's efforts to prohibit school employees from having anything to do with recommending medications and any sort of psychological or psychiatric evaluations for children.

When my son Justin was in first grade, he would finish his school work early and hum. I was called into the school by his teacher who told me that she thought Justin had Attention Deficit Disorder. She told me that I needed to take Justin to the school counselor.

The counselor saw Justin and told me that I needed to get him a prescription for Ritalin through a medical doctor. I didn't want my son medicated and didn't agree with her "diagnosis" as Justin was in fact just fine and so I refused. My husband and I were repeatedly called into the counselor's office. She was verbally abusive and once even screamed at us. My husband and I were afraid that our son would be expelled if we didn't go along. The pressure was very intense.

However, I still refused. When the school personnel realized that I wouldn't give in, they finally dropped the matter. The whole incident lasted a long time and was absolutely horrible. I am very concerned that other parents to whom this happens may feel coerced enough that they agree to have their children drugged against their will.

By the way Justin is doing just fine in school. He is a very good student and a great kid.

I urge you to protect parents and children across the state of Utah and see that this bill becomes law.

January 29, 2002

To Whom It May Concern:

When I was 16 in Davis High school, I was withdrawn and my grades were below average. I was actually bored in school. I mainly spent my time drawing pictures.

Because of my failing grades I was put in a special class called Resource. The school gathered all the Resource program teachers nad the school Principal and asked for a meeting with my mother. She was told during the meeting that there was something wrong with me since I was drawing all the time, and that she was to take me to a psychologist named Dr. Manwill. She was also told that she needed to follow whatever the psychologist recommended. My mother said that even though nothing was clearly stated, she definitely felt that if she didn't go along I wouldn't be allowed back in school.

I went to the psychologist who gave me a very strange test with about 400 questions. After the test was completed, Dr. Manwill said that I had to go to a regular doctor who could prescribe medication. I was sent to Dr. Christian who put me on Prozac initially. After being on this drug I felt horrible and wanted to do violent acts. I had never been violent in my life. My mother took me back to the doctor who then prescribed Zoloft.

I kept going to school. I should point out that my grades didn't improve and I was still drawing. I drew the human figure including bones and muscle structure. The human body has always fascinated me as an artist and I still love doing renderings of it. The school personnel told me mother that my drawings showed that I was a danger to myself and others and that I could no longer attend school.

I remained home where I studied enough to get my high school diploma. I continued to pursue my interest in art and now work full time as a graphic artist.

I never wanted to be on those drugs and don't feel that I ever needed them. The only reason why I was given those drugs in the first place was because my mother felt she had no choice. Getting off Zoloft was one of the hardest thing I have ever had to do in my life.

TESTIMONY OF DAWN GORDON EXECUTIVE OF ABILITY SCHOOL APRIL, 23, 2002

Dear Legislator,

As an educator, I have been following House Bill 123, the so-called Ritalin bill by Representative Katherine Bryson, with great interest.

In my years of running Ability School I have come across numerous case histories of parents being coerced into drugging their child by school personnel. I assure you that I never considered those case histories to be "anecdotal" as claimed by the Governor when he vetoed HB 123. The number of students being drugged because of recommendations made by school staff is a real problem.

The parents who experienced the coercion were very upset and were left to feel rather helpless. Several parents have brought their children to Ability School because they felt they could no longer keep them in a public school setting without the child being medicated. The coercion brought upon the parents does happen and must be stopped.

The role of the legislature is to create laws to protect citizens from harm and ensure that society can go forward in the most optimum fashion. HB 123 is a very well crafted piece of legislation that accomplished both of those goals. Legislators voted in favor of this bill, and in so doing, recognized that children and parental rights need to be protected.

I believe that the Governor failed to research the issue thoroughly before he vetoed the bill. Had he done so, he would have realized that HB 123 does handle a problem not addressed by any existing law, does protect parents and children from harm, and does not in any way prohibit teachers from communicating with parents.

I urge you to override the Governor's veto of HB 123 and by doing so protect parents and children throughout Utah.

APPENDIX D – WRITTEN STATEMENT OF DR. WILLIAM CAREY, M.D., DIRECTOR OF BEHAVIORAL PEDIATRICS, CHILDREN'S HOSPITAL OF PHILADELPHIA, PHILADELPHIA, PENNSYLVANIA.

Protecting Children: The Use of Medication in Our Nation's Schools

Testimony at Committee on Education and the Workforce William B. Carey, M.D. May 6, 2003

In the last two decades the United States has experienced a great increase in the diagnosis of Attention Deficit Hyperactivity Disorder (ADHD) and its treatment with stimulants. Not only child health professionals but now also a wide variety of unqualified persons, such as preschool teachers and acquaintances, are freely offering the diagnosis and confidently urging parents to accept their judgment and obtain drug treatment, such as methylphenidate (Ritalin), for the child. If a physician formally applies the label, educational and governmental authorities sometimes attempt to coerce parents into accepting the verdict and giving the medication or face the possibility of exclusion of the child from school or being judged unfit parents. This chaotic situation urgently requires intervention at several levels, including the Federal government.

One should acknowledge at the outset that virtually all well informed professional observers agree that about 1-2 % of the child population are so pervasively overactive or inattentive that they are very difficult for anyone to manage. Although the cause of their problems is often not clear, they are likely to perform better with medication as a part of their management. But why are up to 17% or more of children being given this label? Why is 80% of the world's methylphenidate being fed to American children?

- 1) The diagnosis of ADHD is very impressionistic and highly subjective, making it easy to include a broad variety of children:
 - a) The component symptoms, such as "often talks excessively," are not clearly different from normal.
 - b) There is no confirmatory laboratory test, and no proof that the behaviors are due to brain malfunction.
 - c) The diagnosis is usually made with vaguely worded, brief questionnaires.
- 2) Even if one accepts the current definition, there is abundant evidence that it is not being applied rigorously at the practical level. Two large surveys of medical practice in the leading psychiatric and pediatric journals have established that about 60% of the time medical practitioners are not using the established diagnostic criteria.
- 3) Contrary to the popular notion, the stimulants being prescribed today are not specific for ADHD. Improved behavior when taking them is not proof of the diagnosis. Ritalin would make any of us function better.

I am one of a group of pediatric moderates who say that both the radical critics and the American Psychiatric Association's diagnostic system are wrong, because we believe that these children do have real problems but that the diagnosis and management is not so simple as is presently being proposed by the Association's official manual.

There is no easy answer to this chaotic situation. The main elements in a solution could be: 1) a better diagnostic system, 2) better research, 3) better education of professionals and the public, 4) better individualized evaluations of children, 5) better treatment with greater reliance on psychosocial and educational interventions, 6) better monitoring of aggressive advertising by the drug companies, 7) better reimbursement schemes for physicians so that they are allowed to take the time necessary to do adequate evaluations. The appropriate professional groups must solve the first five of these steps. The last two lie within the proper range of the Federal government.

To these measures I add for your special consideration today the need for national legislation to prevent educational and governmental officials at any level from requiring parents to accept the diagnosis and use drug treatment for fear of the legal actions of exclusion from school or child protective agency intervention.

My reasons are simple: The definition of ADHD is extremely vague, the application of it in American medical practice is inadequately disciplined, and the current treatment is nonspecific and noncurative. For parents to be penalized in any way for skepticism and noncompliance would be medically unsound and ethically unsupportable.

Committee on Education and the Workforce Witness Disclosure Requirement -- "Truth in Testimony" Required by House Rule XI, Clause 2(g)

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Your Name: William Bacon CAREY	****	UD	
 Will you be representing a federal, State, or local government entity? (If the answer is yes please contact the committee). 	Yes	No.	
Please list any federal grants or contracts (including subgrants or subcontracts) which you have received since October 1, 2000:			
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HRSK. MCHIB Training Grant 2003-2008			
3. Will you be representing an entity other than a government entity?	Yes	(No)	
4. Other than yourself, please list what entity or entities you will be representing:			
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5. Please list any offices or elected positions held and/or briefly describe your representational capacity with each of the entities you listed in response to question 4: No curvent offices. Former fresident, Society for Developments and Behavioral Redictries 6. Please list any federal grants or contracts (including subgrants or subcontracts) received by the entities you listed in response to question 4 since October 1, 2000, including the source and amount of each grant or contract:			
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7. Are there parent organizations, subsidiaries, or partnerships to the entities you Yes No lisclosed in response to question number 4 that you will not be representing? If to, please list:			
Signature: William Blushey 5/5/03			
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APPENDIX E – WRITTEN STATEMENT OF DR. LANCE CLAWSON, PRIVATE PSYCHIATRIST, CABIN JOHN, MARYLAND.

AMERICAN ACADEMY OF CHILD & ADOLESCENT PSYCHIATRY

American Academy of Child and Adolescent Psychiatry
Statement for the
House Education and the Workforce Committee
Subcommittee on Education Reform
May 6, 2003
2175 Rayburn House Office Building
Washington, DC

Protecting Children: The Use of Medication on Our Nation's Schools?

Delivered by Lance Clawson, M.D.

Introduction

The American Academy of Child and Adolescent Psychiatry (AACAP) is a medical membership association established by child and adolescent psychiatrists in 1954. With 6,700 members strong, the AACAP is the leading national medical association dedicated to treating and improving the quality of life for the estimated 7 – 12 million American youth under 18 years of age who are affected by emotional, behavioral, developmental and mental disorders. AACAP supports research, continuing medical education and access to quality care. Child and adolescent psychiatrists are physicians fully trained in diagnosing and treating the disorders of childhood and adolescence.

My name is Lance Clawson, M.D. I am a Board Certified Child and Adolescent Psychiatrist practicing in Bethesda, Maryland. Currently in private practice, I have served as the medical director of Child and Adolescent Psychiatry at the University of Maryland School of Medicine, and I am a clinical assistant professor of psychiatry at the Uniformed Services University of the Health Services. I am a member of the American Academy of Child and Adolescent Psychiatry.

The AACAP thanks Chairman Castle for holding this hearing. It is important that this hearing presents the comprehensive information about treatment for children's mental illnesses. This statement represents basic background information rather than the final word on diagnosis and treatment of any one disorder. Hearings such as this help respond to the periodic waves of media attention questioning the prevalence and treatment of certain disorders such as Attention-Deficit-Hyperactivity Disorder (ADHD), which are confusing to the public and understandably perplexing to legislators. Some reports on children's mental illnesses are carefully researched, balanced articles, defining the disorder and its treatment and educating readers, other publications have caused confusion and spread misinformation. This hearing can make legislators and the public better able to judge the validity of information and clarify the misinformation and misperceptions.

The AACAP is concerned about the effect of H.R. 1170, legislation that was attached as an amendment to H.R. 1350, the Individuals with Disabilities Education Act (IDEA) requiring schools to develop policies and procedures prohibiting school personnel from requiring that a child be placed on psychotropic medications as a condition of attending school. AACAP agrees that medications should be used only as part of a treatment plan arrived at after a comprehensive evaluation and diagnosis. Medication assessment and prescribing medication is the exclusive role of a qualified medical professional, not school personnel. The decision to include medication as part of the treatment plan for a child or adolescent with a mental illness should be a decision agreed to by parents and caregivers, in close consultation with a qualified and trusted medical professional.

Schools are a critically important source of information for families about their children and their emotional and mental well being. The importance of open communication between school professionals and families about the health and well being of students, and where indicated, the freedom to recommend a comprehensive medical evaluation, cannot be overstated. The AACAP is concerned about legislation that would restrict school professionals from communicating with families about legitimate mental health related concerns. While H.R.1170 does not explicitly prohibit communication between school

personnel and families about mental health concerns, its enforcement provisions could cause school personnel to be fearful about communicating with families regarding a student's emotional or behavioral well-being.

The more pressing issue, as reported by the Surgeon General in 1999, is the unacceptably high number of children with mental illnesses that are not being diagnosed or treated. The AACAP is concerned that the amendment to H.R. 1350 may create a barrier to treatment for children and adolescents with mental illnesses, many of whom are identified in school settings.

General Status of Children's Mental Health

The Surgeon General's 2000 report on children's mental health estimated that about 12 million American children and adolescents aged 9 to 17 have a diagnosable mental or emotional illness. Of this number, fewer than 20% receive treatment. Barriers to treatment are a lack of affordability, lack of availability of specialists, including child and adolescent psychiatrists, and stigma. The stigma carried by mental illnesses is often worse in children than in adults. Parents often worry that medications will stigmatize their child. The increased recognition of children and adolescents with mental illnesses underscores the importance of research into of children's mental illnesses and the critical need for more effective treatment options, including new medications.

This Congress is also considering whether to make parity for mental illnesses the law, and doing this would advance the timely assessing, diagnosing and treating of children with mental illnesses. We must be sure that this will be done accurately and appropriately.

Attention-deficit/hyperactivity, the Disorder

It is important that this hearing's record contain accurate information about the prevalence, diagnosis and treatment children's mental illnesses, including the use of medications. Research on this disorder is ongoing and extensive, and new findings are a constant, but children and adolescents showing symptoms that raise concerns should have access to timely assessment, appropriate diagnosis and treatment that is safe and effective.

From the AACAP Practice Parameters for the Assessment and Treatment of Children, Adolescents, and Adults With Attention-Deficit/Hyperactivity Disorder

Attention-deficit/hyperactivity disorder is one of the most common psychiatric disorders of childhood and adolescence. Recent clinical experience and research document the continuation of symptoms into adulthood. The literature on ADHD is voluminous, with literature searches revealing hundreds of studies on the disorder. As with all illnesses, mental or physical, research is ongoing with findings integrated into practices as they are made available through training or publication. The AMA's Council on Scientific Affairs 1997 report responded to a request from physicians that the AMA study the increasing number of diagnoses of ADHD and address public concern regarding possible overprescription of ADHD medications.

ADHD is a condition with onset in childhood, most commonly becoming apparent during the first years of elementary school. ADHD may be associated with a number of co-morbid psychiatric conditions as well as with impaired academic performance and with both patient and family emotional distress.

Epidemiology of ADHD

According to the National Institute of Mental Health (NIMH), Attention Deficit Hyperactivity Disorder, or ADHD, is the most commonly diagnosed psychiatric disorder of childhood. It's estimated to affect approximately 5 percent of school-age children, although published studies have identified a prevalence rate as high as 12% in some populations. It occurs three times more often in boys than in girls.

We also know that ADHD runs in families, and contrary to previous beliefs, it doesn't always go away as you grow up. In fact, the latest research indicates that as many as half of all children with ADHD continue to have problems into adulthood. This is actually one of the reasons there is an increase in the overall use of medication: adults are now being recognized and treated for ADHD.

Understanding and Diagnosing ADHD

The key features of the diagnosis include: inattention, hyperactivity and impulsivity. The symptoms must also be interfering with the child's life at home, in school, at work or with their friends. The diagnostic criteria are specific and well established within the field. They are the product of extensive and numerous research studies conducted at academic centers and clinical facilities throughout the country. (see attached AMA Council on Scientific Affairs (CSA) Report 5-A-97).

ADHD is not an easy diagnosis to make, and it's not a diagnosis that can be made in a 5 or 10 minute office visit. Many other problems, including anxiety disorders, depression and learning disabilities can present with signs and symptoms that look similar to ADHD. There's also a high degree of co-morbidity, meaning that over half the children who have ADHD also have a second significant psychiatric problem.

The diagnosis of ADHD requires a comprehensive assessment by a trained clinician. In addition to direct observation, the evaluation includes a review of the child's developmental, social, academic and medical history. It should also include input from the child's parents and teachers, and a review of the child's records. Schools play a critical role in identifying kids who are having problems, but schools should not make diagnoses or dictate treatment. ADHD is also a condition that should not be taken lightly. Without proper treatment, a child with ADHD may fall behind in schoolwork and have problems at home or with friends. It can also have long-term effects on a child's self-esteem, and lead to other problems in adolescence, including an increased risk of substance abuse, adolescent pregnancy, school failure and trouble with the law.

The treatment of ADHD should be comprehensive, and individualized to the needs of the child and family. Medication, including methylphenidate or Ritalin, can be extremely helpful for many children, but medication alone is rarely the appropriate treatment for complex child psychiatric disorders such as ADHD. Medication, if it is used, should only be used as part of a comprehensive treatment plan, which will usually include individual therapy, family support and counseling, and work with the schools on an individualized education plan (IEP) tailored to help the child succeed academically.

In terms of methylphenidate, there are literally hundreds of studies clearly demonstrating the effectiveness of this medication on many of the target symptoms of ADHD. It is also

generally well tolerated by children, with minimal side effects. Nonetheless, there are concerns that some children may be placed on medication without a comprehensive evaluation, accurate and specific diagnosis or an individualized treatment plan. There are similar concerns about the many children with ADHD and other psychiatric disorders, who would benefit from treatment, including treatment with medication, but who go unrecognized and undiagnosed, and who are not receiving the help that they need.

General Epidemiology and Prevalence of ADHD

Current estimates indicate that 10 percent of boys and 2 percent of girls have ADHD, so general prevalence is estimated at 6 to 9 percent of the school-age population in the United States. ADHD accounts for one third to one half of referrals for mental health services for children. There is a strong male predominance, with an almost 10 to one ratio for diagnosis boys to girls. The reported number of people with ADHD in the United States was over 2 million in 1995, up from 900,000 in 1990. The rapid increase in these numbers and in the prescribing of medications, specifically Ritalin, for the treatment of ADHD, has raised questions about accurate diagnosis and treatment. Medical associations such as the American Academy of Child and Adolescent Psychiatry, the American Psychiatric Association and the American Academy of Pediatrics have developed guidelines for diagnosing and treating ADHD. The AACAP has developed educational materials for parents and educators to help them understand this disorder and judge the accuracy of the diagnosis and the course of the treatment plan. Because child and adolescent psychiatrists are the only medical specialty with specific training in the diagnosing of childhood and adolescent mental illnesses, a special effort has been taken by the AACAP to inform the public and the media about ADHD.

Recent Prevalence Data

Last September, a review article by child and adolescent psychiatrist Peter Jensen, M.D., addressed this issue in detail. Dr. Jenson's article is included in the background materials. Dr. Jensen is currently the Ruane Professor of Child Psychiatry at Columbia University. He was formerly the Associate Director for Child and Adolescent Research at the National Institute of Mental Health. He notes in his article that most studies and media reports have not been based on actual diagnostic data, but have relied instead on HMO or Medicaid medication databases. Dr. Jensen and his colleagues actually performed comparative evaluations of 1,285 children in 4 communities (Atlanta, New Haven, Westchester and San Juan, Puerto Rico) to determine the prevalence of ADHD, as well as the forms of treatment utilized. The results were that 5.1% of children and adolescents between the ages of 9 and 17 met the diagnostic criteria for ADHD; yet only 12.1% of these children were being treated with medication, suggesting that at least in these communities, medication is currently under-prescribed. These authors also found 8 children who were receiving medication who did not meet the full diagnostic criteria for ADHD, although they did have high levels of ADHD symptoms. Dr. Jensen concludes that on the basis of these results, there is no evidence of widespread over-treatment with medication. On the contrary, it appears that, at least in these communities, the majority of children with ADHD are not receiving what we would consider to be appropriate and effective treatment.

Prescribing Practices: Are Children Being Overmedicated?

The issue of prescribing practices also enters into the discussion of diagnosing ADHD or any other mental illnesss. It is established that there are regional, professional and demographic variations in actual prescribing patterns and practices, which would lead to

making a case for both "under-" and "over-prescribing," i.e. appropriate and inappropriate use of medications. Dr. Jensen states that, "...it is essential for clinicians and prescribers to separate fact from fancy concerning actual prescribing practices. Such information should serve not only to define gaps in research knowledge, but also to heighten professionals' awareness about evolving practice trends, so that more informed discussion could take place in professional and public arenas." The APA, AACAP and American Academy of Pediatrics have all developed practice parameters and guidelines for treating ADHD. The organizations have also included distribution of the parameters as part of the concerted effort to make updated diagnostic information easily available. One example of reducing geographic differences is the recent purchase of the AACAP's ADHD practice parameters by the state of North Carolina for distribution to clinicians who work in public health in that state. The results of this exercise are not available yet, but it reveals how serious officials are about the issue of accurate diagnosis and treatment of the children within their jurisdictions.

One disturbing prescribing practice, is that of prescribing presumptively rather than after a thorough assessment. This practice can be adjusted as parameters and guidelines become accessible to physicians who are not trained to treat children with mental illnesses. It will also be assisted by additional training support. In a study released in 2000, a survey of office visits to physicians throughout the United States, found that the proportion of visits by children or adolescents ages 0 to 17 years with a diagnosis of ADHD that also resulted in a prescription of psychostimulant medication had increased significantly between 1989 and 1996.

When looking at prevalence, the prescribing practices must be considered as part of the discussion. Understanding children's mental illnesses and how to diagnose and treat is not a constant, especially when prescribing medications. The base of research and the data attached to it advance the numbers of children recognized and referred and, thus, the number diagnosed and treated. This is progress. A key part of this progress is to assure the public that the diagnosis is accurate and the treatment effective.

The possibility of misunderstandings about the nature of prescribing practices for children's mental illnesses reflects the need for ongoing research to assure the public further that these conditions exist and that children and adults do not have to endure the symptoms that keep them from developing naturally. To the extent one believes that such conditions are rare or do not exist in children, any amount of prescribing of psychotropic agents is likely to be viewed as "over-prescribing." Some research shows that up to 21% of children between the ages of 9 and 17 have diagnosable mental or addictive disorders (Shaffer et al, 1996). Dr. Jensen addresses the issue of "over-prescribing" in his most recent article (Jensen, 2002), "Without awareness of the reality of childhood mental illness and the impact that these conditions exert on children's development, the myth will persist among many persons that psychotropic medications should not be used at all with children. This "one-size-fits-all" assumption likely does great harm in delaying many parents and professionals in making informed treatment choices. The accusatory question sometimes heard by parents-"Are you drugging your child?"—suggests double standards for the use of psychotropic medications. Although ADHD and other childhood behavioral/emotional disorders can be just as devastating as other life-long ailments, such as asthma and diabetes, psychotropic agents that have been proven effective are often not even considered. However, as when treating asthma or diabetes, delaying effective treatments of childhood behavioral/emotional disorders also poses significant risks, such as enduring declines in functioning and disturbances in development. In many instances, psychotropic medications constitute an essential tool to assist suffering children and their families."

Recognition and Diagnosis of ADHD

One of the primary reasons for this hearing is to examine the increase in the numbers of children and adolescents diagnosed with ADHD. One of the first areas to be examined is the accuracy of the diagnosis. The diagnosis of ADHD cannot be made using a simple checklist of symptoms or reacting to initial comments from a parent or a teacher. We are learning from the ongoing research into ADHD how to more accurately diagnose the disorder, but there is no question that the diagnosis is the key to appropriate treatment and effective outcomes. A child or adolescent with ADHD will have one or more of three types of disorders: hyperactivity, inattention (distractibility), and/or impulsivity. Some will have only one of these disorders; some will have two; some will have all three. Critical to the diagnosis is the understanding that ADHD is neurologically-based and, for most individuals, has been present since birth. Thus, the behaviors reflective of the disorder have been present throughout the child or adolescent's life and are present throughout each day; that is, they are chronic and pervasive.

This concept of chronic and pervasive behavioral patterns is critical to the diagnosis. Such emotional problems as anxiety or depression can result in an individual being restless, inattentive, and irritable (thus impulsive). Certain learning disabilities can result in an individual being inattentive. However, with anxiety, depression, or a learning disability, the hyperactivity, distractibility, and/or impulsivity begins at a certain time or occurs during certain situations. For example, a child is described as hyperactive and inattentive in the fourth grade. It is noted that no previous teacher described the child as such. A more detailed clinical exploration shows that the child's parents separated during the summer between third and fourth grade.

What are the symptoms of ADHD?

Currently, a child who has ADHD has been diagnosed according to the following criteria: DSM-IV Diagnostic criteria for Attention-Deficit/ Hyperactivity Disorder

- A. Either (1) or (2):
- (1) six (or more) of the following symptoms of **inattention** have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level: Inattention
- (a) often fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities
- (b) often has difficulty sustaining attention in tasks or play activities
- (c) often does not seem to listen when spoken to directly
- (d) often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (not due to oppositional behavior or failure to understand instructions)
- (e) often has difficulty organizing tasks and activities
- (f) often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (such as schoolwork or home work)
- (g) often loses things necessary for tasks or activities (e.g., toys, school assignments, pencils, books, or tools) $\frac{1}{2} \left(\frac{1}{2} \right) \left$
- (h) is often easily distracted by extraneous stimuli

- (i) is often forgetful in daily activities
- (2) six (or more) of the following symptoms of hyperactivity/impulsivity have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level: Hyperactivity
- (a) often fidgets with hands or feet or squirms in seat
- (b) often leaves seat in classroom or in other situations in which remaining seated is expected
- (c) often runs about or climbs excessively in situations in which it is inappropriate (in adolescents or adults, may be limited to subjective feelings of restlessness)
- (d) often has difficulty playing or engaging in leisure activities quietly
- (e) is often "on the go" or often acts as if "driven by a motor"
- (f) often talks excessively

Impulsivity

- (g) often blurts out answers before questions have been completed
- (h) often has difficulty awaiting turn
- (i) often interrupts or intrudes on others (e.g., butts into conversations or games)
- B. Some hyperactive-impulsive or inattentive symptoms that caused impairment were present before age 7 years.
- C. Some impairment from the symptoms is present in two or more settings (e.g., at school for work] and at home).
- D. There must be clear evidence of clinically significant impairment in social, academic, or occupational functioning.
- E. The symptoms do not occur exclusively during the course of a Pervasive Developmental Disorder, Schizophrenia, or other Psychotic Disorder and are not better accounted for by another mental disorder (e.g., Mood Disorder, Anxiety Disorder, Dissociative Disorder, or a Personality Disorder).

Longitudinal studies show that between fifty and seventy percent of children will continue to have ADHD as adults. Even for those who improve at puberty, the residual emotional, social, and family problems might persist into adolescence and adulthood if not addressed. It is now understood that in about fifty percent of individuals, ADHD is inherited. Thus, there is a high likelihood that one or both parents also have ADHD or had ADHD as a child. Perhaps some of these studies suggesting parents of children with ADHD have a higher probability of emotional and work difficulties is explained by their unrecognized ADHD.

Another set of research findings suggest that girls with ADHD are more likely to be missed than boys. These findings are especially true for girls who are only inattentive. Boys, when struggling and frustrated, are more likely to act out and misbehave; thus, boys are more likely to be evaluated. Girls, under the same conditions, are more likely to become passive and withdrawn; thus, they are missed.

The Outcome of ADHD

If a child or adolescent with ADHD is not identified and treated, he or she is at great risk for developing serious emotional or behavioral problems. Being unable to attend to learning, there is the risk of academic underachievement and failure, and friendships may suffer. The child experiences more failure than success and is criticized by teachers and family who do not recognize a health problem. These problems increase during adolescence. Some

outcomes studies on these unrecognized individuals suggest a higher risk of school drop out, substance abuse, delinquency, or other serious problems. In November 2000, the Coalition for Juvenile Justice estimated in their annual report that 50 – 75% of teenagers in the juvenile justice system nationwide have a diagnosable mental disorder and these numbers appear to be growing. Thus, it is critical that children with mental illnesses, including ADHD, be identified and diagnosed early. With the proper treatment, the outcome is much more likely to be positive.

Treatment of ADHD

The treatment of ADHD must involve several models of help, including individual and family therapy, cognitive and behavioral therapy, parent education, the use of appropriate behavioral management programs, modification to the child's educational plan, and the use of appropriate medications. Such a multimodal approach is needed because children and adolescents with ADHD frequently have multiple areas of difficulty. As with learning disabilities, the total person must be understood in his or her total environment. Educators, family members and others around a child with ADHD have to understand what is causing the distractibility, loss of concentration, frustration and depression linked to this disorder. Cognitive therapy can help build self-esteem, reduce negative thoughts and improve problem-solving skills. Parents can learn management skills such as issuing instructions one step at a time rather than issuing multiple requests at once. Educational modifications, which all students with ADHD are entitled to under the Individuals With Disabilities Education Act (IDEA) can address the symptoms of ADHD along with any coexisting learning disabilities.

Evaluation by a child and adolescent psychiatrist or psychiatrist specializing in children's disorders is appropriate for any child or adolescent with emotional and/or behavioral problems. Most children and adolescents with serious emotional and behavioral problems need a comprehensive psychiatric evaluation. Unfortunately, access to comprehensive psychiatric evaluations has declined during this age of managed care. Incentives to diagnose quickly and provide a treatment plan based on a rushed evaluation contribute to the statistics that show an ever increasing prevalence rate and more use of stimulant medications.

Comprehensive psychiatric evaluations usually require several hours over one or more office visits for the child and parents. With the parents' permission, other significant people (such as the family physician, school personnel or other relatives) may be contacted for additional information. The comprehensive evaluation frequently includes the following:

- · Description of present problems and symptoms
- Information about health, illness and treatment (both physical and psychiatric), including current medications
- Parent and family health and psychiatric histories
- · Information about the child's development
- · Information about school and friends
- Information about family relationships
- · Psychiatric interview of the child or adolescent

• If needed, laboratory studies such as blood tests, EKG, x-rays, or special assessments (for example, psychological, educational, speech and language evaluation)

The child and adolescent psychiatrist then develops a formulation. The formulation describes the child's problems and explains them in terms that the parents and child can understand. Biological, psychological and social parts of the problem are combined in the formulation with the developmental needs, history and strengths of the child or adolescent.

Time is made available to answer the parents' and child's questions. Parents are often worried about how they will be viewed during the evaluation. Child and adolescent psychiatrists are there to support families and to be a partner, not to judge or blame. They listen to concerns, and help the child or adolescent and his/her family define the goals of the evaluation. Parents should always ask for explanations of words or terms they do not understand, and ask questions about the side effects of the medication, how the medication works, and how long it will be before improvement is noted.

When a treatable problem is identified, recommendations are provided and a specific treatment plan is developed. Child and adolescent psychiatrists are specifically trained and skilled in conducting comprehensive psychiatric evaluations with children, adolescents and families.

Prescription of Medications as Part of the Treatment Process

Prescribing psychoactive medications for children and adolescents requires the judgment of a physician, such as a child and adolescent psychiatrist, or psychiatrist, with training and qualifications in the use of these medications in this age group. Certainly any consideration of such medication in a child or infant below the age of five should be very carefully evaluated by a clinician with special training and experience.

Most medications prescribed for children under age 12 do not as yet have specific approval by the Federal Drug Administration (FDA); such approval requires research demonstrating safety and efficacy. Such research, so far, lags behind the clinical use of these medications. To date, no study has been completed to determine the optimal range of effective doses for preschoolers with ADHD. To address this knowledge gap, two years ago the NIMH began PATS, the Preschoolers with ADHD Treatment Study, currently being conducted across six sites around the country. Other efforts to address the deficiency in pediatric drug research include the development of Research Units of Pediatric Psychopharmacology (RUPP), the Food and Drug Administration's (FDA) pediatric studies program, recently reauthorized under the Best Pharmaceuticals for Children Act (P.L. 107-109), and the 1997 Pediatric Rule requiring studies of medications prescribed for children and adolescents. The combination of the FDA program and the Pediatric Rule has seen a dramatic increase in the number of pediatric clinical trials, from just eleven between 1990 and 1997, to over 400 since 1998. Long-term studies are needed to adequately determine the safety and efficacy of psychoactive medications. In making decisions to prescribe such medications the physician specifically the child and adolescent psychiatrist - should consider data from studies in adults in treating the target disorder and/or symptomatology, any clinical or anecdotal reports of use in child and adolescent patients, studies conducted outside the United States and the experience of colleagues.

It is important to balance the increasing market pressures for efficiency in psychiatric treatment with the need for sufficient time to thoughtfully, correctly, and adequately, assess

the need for, and the response to medication treatment. Monitoring on-going use of psychoactive medications requires sufficient time to assess clinical response, side effects and to answer questions of the child and family. The use of brief medication visits (e.g. 15-minute medication checks) is unacceptable as a substitute for ongoing individualized treatment. The role of psychosocial interventions, including psychotherapy, must be evaluated, and such interventions must be included in the treatment plan.

Research clearly demonstrates that medication can be an effective part of treatment for ADHD. A National Institutes of Mental Health (NIMH) study found that a combination of therapy (specifically behavior modification and social skill building) and medication were the most effective modes of treatment for children with ADHD aged 7 to 9. A child should have had a complete physical examination within the last year before a stimulant is prescribed. This baseline of the physical condition will be used for comparison when the medication is taken over time. Most children should take ADHD medication for a minimum of nine to twelve months. There are medications other than Ritalin prescribed for ADHD, but it has been the first choice for effective treatment. (Koplewicz) Newer medications, such as Strattera, are not stimulants, and are not classified as Schedule II. Ritalin is also the focus of media attention because of the increase in the number of prescriptions written over the last five years. Oversight of this increase should involve an examination of who is prescribing the medication, what diagnostic method was used to establish the disorder, and what does the treatment plan involve other than the medication.

Methylphenidate (Ritalin)

There are more than 200 studies showing that the stimulant Ritalin (generic name: methylphenidate) works effectively for children with ADHD. Stimulants have been used in the treatment of ADHD for more than 90 years. Adults feel more focused and alert after a cup of coffee in the morning. This is basically how Ritalin, and newer stimulants such as Adderall and Concerta, work for children with ADHD. Ritalin and other stimulants increase the alertness of the brain and nervous system, stimulating it to produce more dopamine and norepinephrine. The medication increases the child's attention and reduces excess fidgetiness and hyperactivity, allowing him to focus on his work. Children with ADHD who take Ritalin make fewer errors on a variety of tasks than untreated children do. They are less impulsive and more attentive, both in the classroom and in social situations. (Koplewicz)

Treatment Providers

Currently, treatment for children and adolescents with ADHD can be provided by primary care physicians or by specialists, including child and adolescent psychiatrists, psychiatrists, neurologists, and pediatricians. Other mental health providers who can treat ADHD but do not prescribe medications are psychologists, social workers, and school psychologists.

Different medical specialists see substantially different sectors of the ADHD population. Neurologists tend to see children with ADHD who have seizures and mental retardation. Psychiatrists treat ADHD with personality disorders and concomitant psychiatric illnesses, and child and adolescent psychiatrists are trained to treat specific child and adolescent characteristics and levels of severity. Pediatricians typically treat children with ADHD who have less severe characteristics.

One of the barriers to treatment for children and adolescents with mental illnesses, including

ADHD, is the lack of available specialists trained in the diagnosis and treatment of these disorders. In particular, there is a critical national shortage of child and adolescent psychiatrists. There are about 7,000 child and adolescent psychiatrists nationally while the prevalence rate for children and adolescents with mental illnesses is between 15 and 20 million. Data on this professional shortage comes from several sources including the Council on Graduate Medical Education (COGME), a committee of the Department of Health and Human Services and the Bureau of Health Professions. The COGME report concluded that by 1990, the nation should have over 33,000 child and adolescent psychiatrists. The Bureau of Health Professions projected that between 1995 and 2020, the use of child and adolescent psychiatrists will increase by 100%, with general psychiatry's increase at 19%.

An increase in the numbers of all children's mental health professionals can help reduce one of the barriers to treatment for the families of children with ADHD. The AACAP recommends congressional action in this effort, including passage of the Child Healthcare Crisis Relief Act, H.R. 1359, bipartisan legislation sponsored by Reps. Kennedy (D-RI) and Ros-Lehtinen (R-FL), which would encourage individuals to enter all children's mental health professions through the creation of education incentives.

A Final Word: Are We Over Diagnosing ADHD?

About ten to fifteen years ago a concerted effort was made to educate professionals, parents, and teachers about ADHD. There was concern that too many children in adolescence were missed. A national parent organization, Children and Adults with Attention Deficit Disorder (CHADD), was formed along with other regional organizations. Literature became available to parents and teachers explaining ADHD. Books for the public were written and published. The topic of ADHD became popular in both the print and electronic media. As a result, more children and adolescents have been diagnosed with ADHD. With the increased awareness that the disorder can continue into adulthood, more adults have been diagnosed. The general opinion is that more cases are being diagnosed because parents and teachers are recognizing the behaviors and referring to physicians and because more physicians are correctly making the diagnosis.

RECOMMENDATIONS

The American Academy of Child and Adolescent Psychiatry and the American Psychiatric Association submit the following recommendations for the committee's consideration:

- In order to assure accurate diagnosis and treatment, policies should be approved that support access to clinicians with appropriate training and expertise, and allow sufficient time for a comprehensive assessment.
- To provide access to nondiscriminatory insurance coverage, support is needed for comprehensive parity legislation at both the state and federal level (H.R. 953) so there are fewer barriers to keep children from getting the kind of comprehensive evaluations and individualized treatment they need. The strong support for parity recently voiced by President Bush is appreciated.
- Support is recommended for all efforts to sustain and expand training programs for all child mental health professionals, including programs for child and adolescent psychiatrists (H.R. 1359).

- Opposition to legislation that recognizes only disruptive behavior and offers punitive
 resolutions rather than recognizing the reasons for the behavior and offering help
 through federal health and education services.
- To assure safety in prescribing by all physicians, federal support is needed 1) for the
 increased emphasis of the FDA and the NIMH on research on the appropriate use of
 medication in the psychiatric treatment of children and adolescents, and 2) for
 expanded clinical trials and longitudinal studies for all medications prescribed for
 children (S. 650).
- And finally, support and appreciation should be given to the efforts of the current administration, through the New Freedom Commission on Mental Health, to focus increased attention on the diagnosis and treatment of all psychiatric conditions, including those that affect children and adolescents.

SUMMARY

The prevalence rate for children and adolescents with mental disorders is estimated between 12 and 20 percent – the wide difference of opinion is indicative of the difficulties in measuring numbers across uneven access to treatment and quality of care. Conservatively, there are 15 million American youngsters needing treatment and services at any one time. Only about 20% of these children ever receive any treatment or find their way into a service system that can meet their needs. This rate has not changed significantly for over a decade, yet the question is still raised as to whether there may be too many diagnoses of ADHD and too many prescriptions for stimulants. It is appropriate to look into an issue that receives this much attention, but it is also appropriate to remember that concerns about overdiagnosis can be addressed with better education about the disorder, better training for the providers of treatment, more research into the diagnosis and treatment, and a comprehensive service delivery system. No one -- not children, adolescents or adults -- can be assured an early identification, accurate diagnosis and appropriate treatment until the skills, resources, and governmental support are available. Too many families have to deal with mental illnesses without support, diagnosis, treatment or resources to buy medications. The issue of paramount importance to this debate is the lack of access to affordable treatment for mental illnesses for children, adolescents and their families.

In summary, child psychiatric disorders, including ADHD, are very real and diagnosable illnesses, and they affect thousands of children and adolescents. The good news is that they are also highly treatable. While it is not currently possible to cure all children, with comprehensive, individualized intervention, there can be a significant reduction in the extent to which this disorder interferes with their lives. The key for parents and teachers is to identify kids with problems as early as possible, and make sure they get accurate and effective treatment.

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REFERENCES

Journal of the American Academy of Child and Adolescent Psychiatry, 36:10 Supplement, Practice Parameter for the Assessment and Treatment of Children, Adolescents and Adults With Attention Deficit/Hyperactivity Disorder, October, 1997.

Journal of the American Academy of Child and Adolescent Psychiatry, 41:2 Supplement, Practice Parameter for the Use of Stimulant Medications in the Treatment of Children, Adolescents and Adults. February, 2002.

AACAP Facts for Families No. 6. Children Who Can't Pay Attention/ADHD. May, 1999.

AACAP Facts for Families No. 21. Psychiatric Medication For Children and Adolescents Part 1: How Medications Are Used. November, 1999.

AACAP Facts for Families No. 29. Psychiatric Medication For Children and Adolescents Part 2: Types of Medications. February, 2000.

AACAP Facts for Families No. 51. Psychiatric Medication For Children and Adolescents Part 3: Questions to Ask. March, 2001.

American Medical Association Reports of the Council on Scientific Affairs No. 5-A-97. Diagnosis and Treatment of Attention Deficit Hyperactivity Disorder in School Age Children. Adopted at 1996 Annual Meeting.

American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, fourth edition, Washington, DC, American Psychiatric Association, 1994.

Jensen, Peter, Lori Kettle, BS, et al. *Journal of the American Academy of Child and Adolescent Psychiatry*, 38:7. Are Stimulants Overprescribed? Treatment of ADHD in Four U.S. Communities. July, 1999.

Jensen, Peter. Is ADHD Overdiagnosed and Overtreated? A Review of the Epidemiological Evidence. *Report on Emotional and Behavioral Disorders in Youth*, 2:4. Fall 2002.

Koplewicz, Harold S., It's Nobody's Fault, New Hope, and Help for Difficult Children and Their Parents. Times Books, 1996.

National Institute of Health, National Institute of Mental Health: Attention Deficit Hyperactivity Disorder, NIH 94-3572, 1994.

Silver, Larry B., The Misunderstood Child, A Guide for Parents of Children with Learning Disabilities - 2nd Edition, Human Services Institute and TAB Books, 1992.

Silver, Larry B., Attention Deficit Hyperactivity Disorder: A Clinical Guide to Diagnosis and Treatment, written for clinicians. APA Press, 1992.

Silver, Larry B., Dr. Larry Silver's Advice to Parents on Attention Deficit Hyperactivity Disorder, written for parents. APA Press, 1992.

U.S. Department of Health and Human Services. *Mental Health: A Report of the Surgeon General.* Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health, 1999.

U.S. Public Health Service, Report of the Surgeon General's Conference on Children's Mental Health: A National Action Agenda. Washington, DC: 2000.

Talbot, John A., Hales, Robert E, Yudofsky, Stuart, C., *Textbook of Psychiatry*, American Psychiatric Press, 1988.

Vitiello, Benedetto. Current Research on Mental Health Treatments for Children and Adolescents. *Emotional and Behavioral Disorders in Youth*, 4:2. Fall 2002.

Attachments:

- 1) AACAP Facts for Families No. 21 Psychiatric Medication for Children and Adolescents Part 1 How Medications Are Used. 11/99
- 2) AACAP Facts for Families No. 29. Psychiatric Medication For Children and Adolescents Part II: Types of Medications.
- 3) AACAP Facts for Families No. 51 Psychiatric Medication for Children and Adolescents Part III: Questions To Ask. 3/01.
- 4) AACAP Facts for Families No. 6 Children Who Can't Pay Attention. 5/99.
- 5) AACAP Facts for Families No. 52 Comprehensive Psychiatric Evaluation. 11/95.
- 6) Report of the Council on Scientific Affairs, Diagnosis and Treatment of Attention Deficit Hyperactivity Disorder in School-Age Children. American Medical Association. CSA Report 5-A-97. 1997.

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Committee on Education and the Workforce Witness Disclosure Requirement - "Truth in Testimony" Required by House Rule XI, Clause 2(g)

Your Name: LANCE D. CLANSON M.D.		
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To: Committee on Education and the Workforce

Regarding: Question #6 of the Witness Disclosure Requirement

From: Mary Crosby, American Academy of Child and Adolescent Psychiatry

202.966.7300 ex 127

For May 6, hearing before the House Subcommittee on Education Reform

Witness: Lance Clawson, M.D.

Please list any federal grants or contracts (including subgrants or subcontracts)
received by the entities you listed in response to question 4 since October 1, 2000,
including the source and amount of each grant or contract.

Substance Abuse, Mental Health Services Administration \$22,500 for support of the video, "At Risk: Youth on Probation in the P.A.R.K. Program," a look at new approaches to mental illness services in the juvenile justice system.

Substance Abuse, Mental Health Services Administration
\$ 100,000 for support of symposia in various locations in the country to educate members, public officials, public health officials, and others about community systems of care for children and adolescent with emotional disorders.

Substance Abuse, Mental Health Services Administration's Center for Mental Health Services.

\$150,000 for funding the Jeanne Spurlock Minority Medical Student Clinical Fellowship in Child and Adolescent Psychiatry. The funds provide summer fellowship up to \$2,500 for work with a child and adolescent psychiatrist mentor and participation at the AACAP scientific meeting in October of the year of the award.

National Institute of Drug Abuse

For the period July 2000 – June 2001, \$725, 398 for K – 12 awards For the period from July 2001 – June 2002, \$806,398 for K – 12 awards. From July 2002 – June 2003, AACAP received \$806, 398 for K-12 awards, which train researchers in all areas of drug abuse. The researchers (six) are funded for five years at a research base and then they set up a new research base. The grant expands the research base for understanding drug use and abuse. National Institute of Drug Abuse

\$ 99, 873 for funding for the Jeanne Spurlock Research Fellowship In Drug Abuse And Addiction for Minority Medical Students. Provides \$2,500 each for summer fellowships with a child and adolescent researcher-mentor and participation in the AACAP scientific meeting in October in the year of the award.

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APPENDIX F - WRITTEN STATEMENT OF REPRESENTATIVE MAX BURNS, COMMITTEE ON EDUCATION AND THE WORKFORCE, U.S. HOUSE OF REPRESENATIVES, WASHINGTON, D.C.

Congressman Max Burns Statement for HR 1170 Hearing May 6, 2003

Mr. Chairman:

Thank you for holding this hearing on this important topic.

The Child Medication Safety Act of 2003, HR 1170, addresses a significant problem facing children and their parents throughout the nation: some schools are actually requiring parents to place their child on drugs in order to attend school. This is wrong.

No parent should ever be coerced by a teacher or principal or other school official to place their child on a psychotropic drug. No child should ever face the denial of educational services only because they are not taking a psychotropic drug.

Psychotropic drugs such as Ritalin, Adderall, and others are drugs that, when carefully prescribed by a licensed medical practitioner and carefully monitored in the administration, can help an individual with attention deficit disorder (ADD) or attention deficit-hyperactivity disorder (ADHD) control the symptoms of their disease so that they can function. These can be miracle drugs for many people, and when properly diagnosed and properly administered, many people benefit greatly from these drugs. But for those who don't need the drugs, they can be harmful. In several sad instances, children who have been placed on these drugs have died from complications arising from the psychotropic drug use.

HR 1170 is not anti-school, anti-teacher, or anti-medication; this bill is pro-children and pro-parents. This legislation simply protects our children from unnecessary medication, and it provides parents the decision-making power that they should have for their children already.

I offered a modification of this bill as an amendment during markup on HR 1350. This amendment was broadly supported in a bipartisan manner. Because the amendment only

applied to schools receiving special education funds, I am hopeful that this legislation will move as a stand-alone measure as well so that parents with children in all schools receiving federal funds can have the freedom to choose when their children should be medicated.

I urge my colleagues to support the Child Medication Safety Act and thank the chairman for holding this hearing.

APPENDIX G – WRITTEN STATEMENT FROM AUDREY SPOLARICH, CHAIR, COALITION FOR CHILDREN'S HEALTH SUBMITTED FOR THE RECORD BY REPRESENTATIVE CHIS VANHOLLEN, SUBCOMMITTEE ON EDUCATION REFORM, COMMITTEE ON EDUCATION AND THE WORKFORCE, U.S. HOUSE OF REPRESENATIVES, WASHINGTON, D.C.

Statement by Audrey Spolarich Chair, Coalition for Children's Health

To the Subcommittee on Education Reform United States House of Representatives Committee on Education and the Workforce

May 6, 2003

Mr. Chairman and Honorable members of the Subcommittee, thank you for the opportunity to provide my prospective, and, I believe, the perspective of many parents, and others, who fight every day for the right to mental health care and the end to the stigma faced by so many of our citizens with mental illness.

My name is Audrey Spolarich. I have spent my entire career in the field of disease prevention and health promotion. I am a health economist and am currently serving my third year as chair of the Coalition for Children's Health, which was established in 2000 to support and assist Congress in the passage of the Children's Health Act of 2000—the most comprehensive health legislation ever focused on our nation's children and maximizing their health and their contribution to society through meaningful societal interaction and employment.

Our Coalition includes the American Association of Health and Disabilities, the American Obesity Association, the Down Syndrome Association, the Fragile X Research Foundation, the National Alliance for Autism Research, the Parent

Project Muscular Dystrophy and the Tourette Syndrome Association, among others.

The Children's Health Act was landmark legislation designed to create and expand federal programs that will dramatically improve the quality of life for millions of children. Almost three years on, we continue to advocate for full funding of the Children's Health Act. Our objective is simple: to improve the quality of life of millions of children who have congenital and acquired disabilities and conditions, including: autism, fragile X, juvenile diabetes, mental illness, asthma, spina bifida, cerebral palsy, epilepsy, muscular dystrophy, Hepatitis C, traumatic brain injury, tourette syndrome and early hearing loss. It is with children like these in mind—particularly those who are helped by medications that work on damaged or poorly functioning areas of the brain—that I testify today. Thank you for the opportunity.

A troubling trend threatens the well-being of millions of children in our country; it is the politicization of the practice of medicine. State lawmakers and members of Congress are attempting to restrict the ways in which doctors; teachers and parents work together to help children with conditions such as attention deficit/hyperactivity disorder (ADHD), tourette syndrome, epilepsy, depression, anxiety and bi-polar disorder. The state legislatures of 19 states have considered legislation that would provide significant disincentives for open communication between school staff and parents in recent years, thankfully with little success. Today's hearing is yet another example of the problem.

Today's hearing has no place in the education reform subcommittee. This is dangerously close to attempting to codify the practice, the <u>art</u> of medicine. The existence of this hearing—and others like it—could interfere, even completely obstruct, communication between school staff, teachers, health care professionals, including physicians, and parents about a child's health.

For our nation's teachers who are listening today, or who will read the transcript of this hearing in the public record these words are a warning.

This warning will significantly reduce the open dialog between parent and schoolteacher or staff. Teachers may become reticent to work with physicians and parents to incorporate a treatment plan in their classroom. Ultimately, it may render a school system too cautious to help a child in need. Such outcomes would be detrimental to the health, well-being and education of our nation's children.

It is the policy of the American Academy of Pediatrics to encourage physicians to gather information from teachers, as well as parents, sports coaches, religious instructors and Scout leaders about a child's behavior and progress during diagnosis and treatment of any serious illness. It is sound medicine to keep all lines of communication open. At issue today is the proper practice of medicine; it's not educational reform, not culture, not ideology, not politics.

Sadly, the chilling effects of politics on medical practice in this area have already emerged. Last week a DC based child psychiatrist told me new restrictions on

discussions between teachers and physicians could lead to fewer referrals and would certainly force her to take another look at therapies that would not fall under the restrictions of this law because they would not be labeled for these indications in children.

So, how did we get here? We are here because epidemics make headlines: whether its SARS, obesity, or type II diabetes. There are some individuals disturbed by an increase in the number of children taking medication for conditions such as ADHD and depression. They believe the diagnosis and TREATMENT of this illness is an epidemic that must be stopped. Furthermore, they question science and the evidence-based medicine indicating a significant prevalence of mental illnesses and disorders.

To those people, I say these statistics are a sign that medical science is gradually gaining a better understanding of mental illness in the young and very young. Science has improved its diagnostic tools and skills in almost all disease categories. In fact, data published this past month point to a promising new laboratory test for ADHD markers. Since January 2003 alone, over 80 peer-reviewed medical journals have published on the subject of ADHD—most of them looking at evolving diagnostics techniques, prevalence studies, epidemiologic evidence and, interestingly, one potential explanation of increased diagnosis of ADHD—a growing recognition of the condition in females.

However, there is a more troubling driving force behind today's hearings and similar efforts in the political arena: an effort by individuals and groups label

psychiatric diagnoses, starting with ADHD and ADD, as "scientific fraud." These persons are approaching non-health related congressional committees because they cannot make inroads in the health care mainstream. Despite an International Consensus statement by 86 leading scientific experts from 9 countries around the globe, there is still a vocal minority that claims that ADHD is a diagnosis that is subjective and is open to arbitrary use and abuse. To arrest the diagnosis of children with ADHD, in their estimation, will prevent psychiatric abuse. With you indulgence, I ask that the International Consensus statement be entered into the record.

From time to time, we read or hear about cases of parents who say school officials attempted to require their children to take medication for psychiatric or behavioral problems in order to attend classes. A member of my own coalition has indicated that a teacher, who did not understand her son's fairly rare form of autism, encouraged the parent to seek a diagnosis of ADHD—despite the parent's attempt to educate the teacher as to the nuances of this form of autism. Ultimately, the woman proved herself an effective advocate for her child, and everyone involved became a little more educated about autism.

None of us, I am sure, can tolerate coercion in any form or forum. However, the exception is not the rule. To exaggerate the number of incidents where school or health and human services officials have overstepped the mark is to risk placing a *de facto* gag order on teachers and others who are often a vital first-step in identifying a child in need.

In closing, I ask you to consider whether or not you will create an environment where concerned teachers don't dare discuss mental health issues with parents, or recommend that a child may need medical attention because the teachers are frightened of breaking a law or triggering a lawsuit. In fact, restrictions on communication between our nation's school staff and parents will work <u>against</u> the interests of the children we are trying to identify, treat and protect. Thank you.

We, the undersigned consortium of international scientists, are deeply concerned about the periodic inaccurate portrayal of attention deficit hyperactivity disorder (ADHD) in media reports. This is a disorder with which we are all very familiar and toward which many of us have dedicated scientific studies if not entire careers. We fear that inaccurate stories rendering ADHD as myth, fraud, or benign condition may cause thousands of sufferers not to seek treatment for their disorder. It also leaves the public with a general sense that this disorder is not valid or real or consists of a rather trivial affliction.

We have created this consensus statement on ADHD as a reference on the status of the scientific findings concerning this disorder, its validity, and its adverse impact on the lives of those diagnosed with the disorder as of this writing (January 2002).

Occasional coverage of the disorder casts the story in the form of a sporting event with evenly matched competitors. The views of a handful of nonexpert doctors that ADHD does not exist are contrasted against mainstream scientific views that it does, as if both views had equal merit. Such attempts at balance give the public the impression that there is substantial scientific disagreement over whether ADHD is a real medical condition. In fact, there is no such disagreement—at least no more so than there is over whether smoking causes cancer, for example, or whether a virus causes HIV/AIDS.

The U.S. Surgeon General, the American Medical Association, the American Psychiatric Association, the American Academy of Child and Adolescent Psychiatry, the American Psychological Association, and the American Academy of Pediatrics, among others, all recognize ADHD as a valid disorder. Although some of these organizations have issued guidelines for evaluation and management of the disorder for their membership, this is the first consensus statement

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issued by an independent consortium of leading scientists concerning the status of the disorder. Among scientists who have devoted years, if not entire careers, to the study of this disorder there is no controversy regarding its existence.

ADHD and Science

We cannot overemphasize the point that, as a matter of science, the notion that ADHD does not exist is simply wrong. All of the major medical associations and government health agencies recognize ADHD as a genuine disorder because the scientific evidence indicating it is so overwhelming.

Various approaches have been used to establish whether a condition rises to the level of a valid medical or psychiatric disorder. A very useful one stipulates that there must be scientifically established evidence that those suffering the condition have a serious deficiency in or failure of a physical or psychological mechanism that is universal to humans. That is, all humans normally would be expected, regardless of culture, to have developed that mental ability.

And there must be equally incontrovertible scientific evidence that this serious deficiency leads to harm to the individual. Harm is established through evidence of increased mortality, morbidity, or impairment in the major life activities required of one's developmental stage in life. Major life ctivities are those domains of functioning such as education, social relationships, family functioning, independence and self-sufficiency, and occupational functioning that all humans of that developmental level are expected to perform.

As attested to by the numerous scientists signing this document, there is no question among the world's leading clinical researchers that ADHD involves a serious deficiency in a set of psychological abilities and that these deficiencies pose serious harm to most individuals possessing the disorder. Current evidence indicates that deficits in behavioral inhibition and sustained attention are central to this

disorder—facts demonstrated through hundreds of scientific studies. And there is no doubt that ADHD leads to impairments in major life activities, including social relations, education, family functioning, occupational functioning, self-sufficiency, and adherence to social rules, norms, and laws. Evidence also indicates that those with ADHD are more prone to physical injury and accidental poisonings. This is why no professional medical, psychological, or scientific organization doubts the existence of ADHD as a legitimate disorder.

The central psychological deficits in those with ADHD have now been linked through numerous studies using various scientific methods to several specific brain regions (the frontal lobe, its connections to the basal ganglia, and their relationship to the central aspects of the cerebellum). Most neurological studies find that as a group those with ADHD have less brain electrical activity and show less reactivity to stimulation in one or more of these regions. And neuro-imaging studies of groups of those with ADHD also demonstrate relatively smaller areas of brain matter and less metabolic activity of this brain matter than is the case in control groups used in these studies.

These same psychological deficits in inhibition and attention have been found in numerous studies of identical and fraternal twins conducted across various countries (US, Great Britain, Norway, Australia, etc.) to be primarily inherited. The genetic contribution to these traits is routinely found to be among the highest for any psychiatric disorder (70–95% of trait variation in the population), nearly approaching the genetic contribution to human height. One gene has recently been reliably demonstrated to be associated with this disorder and the search for more is underway by more than 12 different scientific teams worldwide at this time.

Numerous studies of twins demonstrate that family environment makes no significant separate contribution to these traits. This is not to say that the home environment, parental management abilities, stressful life events, or deviant peer relationships are unimportant or have no influence on individuals having this disorder, as they certainly do. Genetic tendencies are expressed in interaction with the environment. Also, those having ADHD often have other associated disorders and problems, some of which are clearly related to their social environments. But it is to say that the underlying psychological deficits that comprise ADHD itself are not solely or primarily the result of these environmental factors.

This is why leading international scientists, such as the signers below, recognize the mounting evidence of neurological and genetic contributions to this disorder. This evidence, coupled with countless studies on the harm posed by the disorder and hundreds of studies on the effectiveness of medication, buttresses the need in many, though by no means all, cases for management of the disorder with multiple therapies. These include medication combined with educational, family, and other social accommodations. This is in striking contrast to the wholly unscientific views of some social critics in periodic media accounts that ADHD constitutes a fraud, that medicating those afflicted is questionable if not reprehensible, and that any behavior problems associated with ADHD are merely the result of problems in the home, excessive viewing of TV or playing of video games, diet, lack of love and attention, or teacher/school intolerance.

ADHD is not a benign disorder. For those it afflicts, ADHD can cause devastating problems. Follow-up studies of clinical samples suggest that sufferers are far more likely than normal people to drop out of school (32–40%), to rarely complete college (5–10%), to have few or no friends (50–70%), to underperform at work (70–80%), to engage in antisocial activities (40–50%), and to use tobacco or illicit drugs more than normal. Moreover, children growing up with ADHD are more likely to experience teen pregnancy (40%) and sexually transmitted diseases (16%), to speed excessively and have multiple car accidents, to experience depression (20–30%) and personality disorders (18–25%) as adults, and in hundreds of other ways mismanage and endanger their lives.

Yet despite these serious consequences, studies indicate that less than half of those with the disorder are receiving treatment. The media can help substantially to improve these circumstances. It can do so by portraying ADHD and the science about it as accurately and responsibly as possible while not purveying the propaganda of some social critics and fringe doctors whose political agenda would have you and the public believe there is no real disorder here. To publish stories that ADHD is a fictitious disorder or merely a conflict between today's Huckleberry Finns and their caregivers is tantamount to declaring the earth flat, the laws of gravity debatable, and the periodic table in chemistry a fraud. ADHD should be depicted in the media as realistically and accurately as it is depicted in science—as a valid disorder having varied and substantial adverse impact on those who

may suffer from it through no fault of their own or their parents and teachers.

Sincerely,

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CONSENSUS STATEMENT—SUPPORTING REFERENCES

Accardo, P. J., Blondis, T. A., Whitman, B. Y., & Stein, M. A. (2000).

Attention deficits and hyperactivity in children and adults. New York: Marcel Dekker.

Achenbach, T. M. (1991). Manual for the revised child behavior profile and child behavior checklist. Burlington, VT: Author

Achenbach, T. M., & Edelbrock, C. S. (1983). Manual for the child

ACHERIDAKI, I. M., & EMEIDTOCK, C. S. (1983). Manual for the child behavior profile and child behavior checklist. Burlington, VT: Achenbach (author). Achenbach, T. M., & Edelbrock, C. S. (1987). Empirically based assessment of the behavioral/emotional problems of 2- and 3-year-old children. Journal of Abnormal Child Psychology, 15, 629-650.

Achenbach, T. M., McConaughy, S. H., & Howell, C. T. (1987). Child/adolescent behavioral and emotional problems: Implications of cross-informant correlations for situational speci-ficity. Psychological Bulletin, 101, 213–232.
Altepeter, T.S., & Breen, M. J. (1992). Situational variation in prob-lem behavior at home and school in attention deficit disorder

with hyperactivity: A factor analytic study. Journal of Child Psychology and Psychiatry, 33, 741–748. American Psychiatric Association. (1968). Diagnostic and statis-tical manual of mental disorders (2nd ed.). Washington, DC: Author.

Author.
Author.
American Psychiatric Association. (1980). Diagnostic and statistical manual of mental disorders (3rd ed.). Washington, DC: Author.
American Psychiatric Association. (1987). Diagnostic and statistical manual of mental disorders (3rd ed., Rev.). Washington, DC:

American Psychiatric Association. (1994). Diagnostic and statis-tical manual of mental disorders (4th ed.). Washington, DC: Author.

Anderson, C. A., Hinshaw, S. P., & Simmel, C. (1994). Mother-child interactions in ADHD and comparison boys: Relation-

child interactions in ADHD and comparison boys: Relationships with overt and covert externalizing behavior. Journal of Abnormal Child Psychology, 22, 247–265.

Angold, A., Costello, E. J., & Erkanli, A. (1999). Comorbidity. Journal of Child Psychology and Psychiatry, 40, 57–88.

Antrop, I., Roeyers, H., Van Oost, P., & Buysse, A. (2000). Stimulant seeking and hyperactivity in children with ADHD. Journal of Child Psychology and Psychiatry, 41, 225–231.

Applegate, B., Lahey, B. B., Hart, E. L., Waldman, I., Biederman, J., Hynd, G. W., et al. (1997). Validity of the age-of-onset criterion for ADHD: A report of the DSM-IV field trials. Journal of American Academy of Child and Adolescent Psychiatry, 36. American Academy of Child and Adolescent Psychiatry, 36, 1211-1221.

Aronen, E. T., Paavonen, J., Fjallberg, M., Soininen, M., Torronen, J. (2000). Sleep and psychiatric symptoms in school-age children. Journal of the American Academy of Child and Adolescent Psychiatry, 39, 502–508.

August, G. J., & Stewart, M. A. (1983). Family subtypes of child-hood hyperactivity. *Journal of Nervous and Mental Disease*, 171, 362–368.

171, 562-568.
August, G. J., Stewart, M. A., & Holmes, C. S. (1983). A four-year follow-up of hyperactive boys with and without conduct disorder. British Journal of Psychiatry, 143, 192-198.
Aylward, E. H., Reiss, A. L., Reader, M. J., Singer, H. S., Brown, J. E., & Denckla, M. B. (1996). Basal ganglia volumes in children with attention deferit hyperactivity disorder. Journal of the property of

dren with attention-deficit hyperactivity disorder. Journal of often with attention-teenen hyperactivity disolver. Journal of Child Neurology, II, 112–115.

Ball, J. D., & Koloian, B. (1995). Sleep patterns among ADHD children. Clinical Psychology Review, 15, 681–691.

Ball, J. D., Tiernan, M., Janusz, J., & Furr, A. (1997). Sleep patterns

among children with attention-deficit hyperactivity disorder:

among children with attention-deficit hyperactivity disorder:
A reexamination of parent perceptions. Journal of Pediatric
Psychology, 22, 389-398.
Baloh, R., Sturm, R., Green, B., & Gleser, G. (1975). Neuropsychological effects of chronic asymptomatic increased lead
absorption. Archives of Neurology, 32, 326-330.
Barkley, R. A. (1985). The social interactions of hyperactive children: Developmental changes, drug effects, and situational
variation. In R. McMahon & R. Peters (Eds.), Childhood

- disorders: Behavioral-developmental approaches (pp. 218-243). New York: Brunner/Mazel.
- Barkley, R. A. (1988). The effects of methylphenidate on the in-teractions of preschool ADHD children with their mothers.
- teractions of prescinol ADHD critical with their moiners.

 Journal of the American Academy of Child and Adolescent
 Psychiatry, 27, 336–341.

 Barkley, R. A. (1989a). The problem of stimulus control and
 rule-governed behavior in children with attention deficit disorder with hyperactivity. In J. Swanson & L. Bloomingdale
 (Eds.), Attention deficit disorders (pp. 203–234). New York:
- Pergamon.

 Barkley, R. A. (1989b). Hyperactive girls and boys: Stimulant drug effects on mother-child interactions. Journal of Child Psychology and Psychiatry, 30, 379–390.

 Barkley, R. A. (1990). Attention-deficit hyperactivity disorder: A handbook for diagnosis and treatment. New York: Guilford.

 Partle, P. (1990). Parenied debated reproduces. A myfield
- Barkley, R. A. (1994). Impaired delayed responding: A unified theory of attention deficit hyperactivity disorder. In D. K.
- theory of attention defact hyperactivity disorder. In D. K. Routh (Ed.), Disruptive behavior disorders: Essays in honor of Herbert Quay (pp. 11–57), New York: Plenum.

 Barkley, R. A. (1997a.) Behavioral inhibition sustained, attention, and executive functions: Constructing a unifying theory of ADHD. Psychological Bulletin, 121, 65–94.

 Barkley, R. A. (1997b.) ADHD and the nature of self-control. New York: Guilford.
- Barkley, R. A. (1998). Attention-deficit hyperactivity disorder: A handbook for diagnosis and treatment (2nd ed.). New York:
- Barkley, R. A. (1999a). Response inhibition in attention deficit hy-peractivity disorder. Mental Retardation and Developmental Disabilities Research Reviews, 5, 177-184.
- Barkley, R. A. (1999b). Theories of attention-deficit/hyperactivity disorder. In H. Quay & A. Hogan (Eds.), Handbook of disruptive behavior disorders (pp. 295-316). New York: Plenum.
- Barkley, R. A. (2001a). The inattentive type of ADHD as a distinct disorder: What remains to be done. Clinical Psychology: Science and Practice, 8, 489-493.
 Barkley, R. A. (2001b). Genetics of childhood disorders: XVII.
- ADHD, Part I: The executive functions and ADHD. Journal of the American Academy of Child and Adolescent Psychiatry, 39, 1064-1068.
- Barkley, R. A. (2001c). The executive functions and self-regulation: An evolutionary neuropsychological perspective. Neuropsychology Review, 11, 1-29.
- Barkley, R. A., Anastopoulos, A. D., Guevremont, D. G., & Fletcher, K. F. (1991). Adolescents with attention deficit hyperactivity disorder: Patterns of behavioral adjustment, academic activity disorder: Fatterins of the clearword adjustifiers, each refunctioning, and treatment utilization. Journal of the American Academy of Child and Adolescent Psychiatry, 30, 752–761.

 Barkley, R. A., Anastopoulos, A. D., Guevremont, D. G., & Fletcher, K. F. (1992). Adolescents with attention deficit by-
- Pietener, K. F. (1992). Adorsecents with attention treated ny-peractivity disorder: Mother-adolescent interactions, family beliefs and conflicts, and maternal psychopathology. *Journal* of Ahnormal Child Psychology, 20, 263–288. Barkley, R. A., & Biederman, J. (1997). Towards a broader defini-
- tion of the age of onset criterion for attention deficit hyperac-tivity disorder. Journal of the American Academy of Child and Adolescent Psychiatry, 36, 1204-1210.

 Barkley, R. A., & Cunningham, C. E. (1979a). Stimulant drugs
- Barkley, R. A., & Cunningham, C. E. (1979a). Summant origs and activity level in hyperactive children. American Journal of Orthopsychiatry, 49, 491–499.
 Barkley, R. A., & Cunningham, C. E. (1979b). The effects of methylphenidate on the mother-child interactions of hyperactive children. Archives of General Psychiatry, 36, 201–208.
- Barkley, R., Cunningham, C., & Karlsson, J. (1983). The speech of hyperactive children and their mothers: Comparisons with normal children and stimulant drug effects. Journal of Learning Disabilities, 16, 105-110.

- Barkley, R. A., DuPaul, G. J., & McMurray, M. B. (1990). A com prehensive evaluation of attention deficit disorder with and without hyperactivity. *Journal of Consulting and Clinical Psychology*, 58, 715–789.

 Barkley, R. A., & Edelbrock, C. S. (1987). Assessing situational
- variation in children's behavior problems: The Home and School Situations Questionnaires. In R. Prinz (Ed.), Advances in behavioral assessment of children and families (Vol. 3, pp. 157-176). Greenwich, CT: JAI Press.
- pp. 157-176). Circenwich, Ct.: AI Fress. Barkley, R. A., Edwards, G., Laneri, M., Fletcher, K., & Metevia, L. (2001). Executive functioning, temporal discounting, and sense of time in adolescents with attention deficit hyperactivity disorder and oppositional defiant disorder. Journal of Abnormal Child Psychology, 29, 541-556.
 Barkley, R. A., Fischer, M., Edelbrock, C. S., & Smallish, L. (1990).
- Barkley, R. A., Fischer, M., Edelbrock, C. S., & Smallish, L. (1990).
 The adolescent outcome of hyperactive children diagnosed by research criteria: I. An 8 year prospective follow-up study. Journal of the American Academy of Child and Adolescent Psychiatry, 29, 546–557.
 Barkley, R. A., Fischer, M., Edelbrock, C. S., & Smallish, L. (1991).
 The adolescent outcome of hyperactive children diagnosed by research criteria: III. Mother-child interactions, family conflicts, and maternal psychopathology. Journal of Child Psychology and Psychiatry, 32, 233–256.
 Barkley, R. A., Fischer, M., Fletcher, K., & Smallish, L. (in press). Persistence of attention deficit hyperactivity disorder into
- Persistence of attention deficit hyperactivity disorder into Persistence or attention denical hyperactivity osciolated into adulthood as a function of reporting source and definition of disorder. Journal of Abnormal Psychology.

 Barkley, R. A., Fischer, M., Smallish, L., & Fletcher, K. (in press).

 Does the treatment of ADHD with stimulant medication
- Does the treatment of ADJID with similarial indectation contribute to fillicit drug use and abuse in adulthood? Results from a 15-year prospective study. Pediatrics.

 Barkley, R. A., Grodzinsky, G., & DuPaul, G. (1992). Frontal lobe functions in attention deficit disorder with and without hyperfunctions in attention deficit disorder with and without hyperfunctions in attention deficit disorder with and without hyperfunctions in attention deficit disorder with and without hyperfunctions.
- activity: A review and research report. Journal of Abno Child Psychology, 20, 163-188.
- Barkley, R. A., Guevremont, D. G., Anastopoulos, A. D., DuPaul, G. J., & Shelton, T. L. (1993). Driving-related risks and outcomes of attention deficit hyperactivity disorder in adolescents and young adults: A3–5 year follow-up survey. Pediatrics, 92, 212-218,
- Barkley, R. A., Karlsson, J., & Pollard, S. (1985). Effects of age on the mother-child interactions of hyperactive children. Journal of Abnormal Child Psychology, 13, 631-638.
- Barkley, R. A., Karlsson, J., Pollard, S., & Murphy, J. V. (1985). Developmental changes in the mother-child interactions of hyperactive boys: Effects of two dose levels of Ritalin. Journal of Child Psychology and Psychiatry and Allied Disciplines, 26, 705-715.
- Barkley, R. A., Licho, R., McGough, J. J., Tuite, P., Feifel, D., Mishkin, F., et al. (2002). Excessive dopamine transporter Mishkin, F., et al. (2002). Excessive dopamine transported density in adults with attention deficit hyperactivity disorder assessed by SPECT with [123 I] altropane. University of Massachusetts Medical School, Worcester, MA.
 Barkley, R. A., Murphy, K. R., & Bush, T. (2001). Time perception and reproduction in young adults with attention deficit hyper-activity disorder (ADHD). Neuropsychology, 15, 351–360.
- Barkley, R. A., Murphy, K. R., DuPaul, G. R., & Bush, T. (in press).
 Driving in young adults with attention deficit hyperactivity
 disorder: Knowledge, performance, adverse outcomes and the
 role of executive functions. Journal of the International Neu-
- role of executive functions. Journal of the International Neu-ropsychological Society.

 Barkley, R. A., Murphy, K. R., & Kwasnik, D. (1996a). Psychological functioning and adaptive impairments in young adults with ADHD. Journal of Attention Disorders, J., 41–54.

 Barkley, R. A., Murphy, K. R., & Kwasnik, D. (1996b). Motor
- vehicle driving competencies and risks in teens and young adults with attention deficit hyperactivity disorder. Pediatrics, 98, 1089-1095

- Barkley, R. A., Shelton, T. L., Crosswait, C., Moorehouse, M., Fletcher, K., Barrett, S., et al. (in press). Preschool children with high levels of disruptive behavior: Three-year outcomes as a function of adaptive disability. Development and Psychopathology, 14, 45-68.
 Bate, A. J., Mathias, J. L., & Crawford, J. R. (2001). Performance
- of the Test of Everyday Attention and standard tests of at-tention following severe traumatic brain injury. The Clinical Neuropsychologist, 15, 405-422. Baumgaertel, A., Wolraich, M. L., & Dietrich, M. (1995). Compar-
- Baungaettel, A., wolatch, M. (1997). A Official disorders in a German elementary school sample. Journal of the American Academy of Child and Adolescent Psychiatry, 34, 629–638.
 Baving, L., Laucht, M., & Schmidt, M. H. (1999). A typical frontal
- brain activation in ADHD: Preschool and elementary school boys and girls Journal of the American Academy of Child and
- boys and girls Journal of the American Academy of Child and Adolescent Psychiatry, 38, 1363-1371.
 Bayliss, D. M., & Roodenrys, S. (2000). Executive processing and attention deficit hyperactivity disorder: An application of the supervisory attentional system. Developmental Neuropsychol-ogy, 17, 161-180.
 Beauchaine, T. P., Katkin, E. S., Strassberg, Z., & Snarr, J. (2001).
 Disinhibitory psychopathology in male adolescents: Discrim-inating conduct disorder from attention-deficit/hyperactivity disorder through consurrent assessment of multiple auto-
- maning conduct usorder from attention-tention/perlectivity disorder through concurrent assessment of multiple auto-nomic states. Journal of Abnormal Psychology, 110, 610–624. Befera, M., & Barkley, R. A. (1984). Hyperactive and normal girls and boys: Mother-child interactions, parent psychiatric status, and child psychopathology. Journal of Child Psychology and Psychiatry, 26, 439–452.
- Psychiatry, 26, 439-452.
 Beiser, M., Dion, R., & Gotowiec, A. (2000). The structure of attention-deficit and hyperactivity symptoms among native and non-native elementary school children. Journal of Abnormal Child Psychology, 28, 425-537.
 Beitchman, J. H., Wekerle, C., & Hood, J. (1987). Diagnostic continuity from preschool to middle childhood. Journal of the American Academy of Child and Adolescent Psychiatry, 26, 604-609.
- 694-699
- Bennett, L. A., Wolin, S. J., & Reiss, D. (1988). Cognitive, behavioral, and emotional problems among school-age children of alcoholic parents. American Journal of Psychiatry, 145, 185-
- Benton, A. (1991). Prefrontal injury and behavior in children. Developmental Neuropsychology, 7, 275-282.
 Berk, L. E., & Potts, M. K. (1991). Development and functional
- significance of private speech among attention-deficit hyper-activity disorder and normal boys. Journal of Abnormal Child
- Psychology, 19, 357-377.
 Bhatia, M. S., Nigam, V. R., Bohra, N., & Malik, S. C. (1991). Attention deficit disorder with hyperactivity among paediatric outpatients. Journal of Child Psychology and Psychiatry, 32, 297–306.
- Biederman, J., Faraone, S. V., Keenan, K., & Tsuang, M. T. (1991). Evidence of a familial association between attention defici-
- Evidence of a ramilial association between attention denert disorder and major affective disorders. Archives of General Psychiatry, 48, 633-642.

 Biederman, J., Faraone, S. V., & Lapey, K. (1992). Comorbidity of diagnosis in attention-deficit hyperactivity disorder. In G. Weiss (Ed.), Child and adolescent psychiatric clinics of North America. America deficit hyperactivity disorder, 233-260. America: Attention-deficit hyperactivity disorder (pp. 335-360)
- America: Attention-deficit hyperactivity disorder (pp. 335-360). Philadelphia: Saunders.
 Biederman, J., Faraone, S. V., Mick, E., Spencer, T., Wilens, T., Kiely, K., et al. (1995). High risk for attention deficit hyperactivity disorder among children of parents with childhood onset of the disorder: A pilot study. American Journal of Psychiatry, 152, 431, 435. 152, 431-435,
- Biederman, J., Faraone, S. V., Mick, E., Williamson, S., Wilens, T. E., Spencer, T. J., et al. (1999). Clinical correlates of ADHD in females: Findings from a large group of girls ascertained

- from pediatric and psychiatric referral sources. Journal of the American Academy of Child and Adolescent Psychiatry, 38, 966-975
- Biederman, J., Faraone, S., Milberger, S., Curtis, S., Chen, L., Marrs, A., et al. (1996). Predictors of persistence and remission of ADHD into adolescence: Results from a four-year prospective
- follow-up study. Journal of the American Academy of Child and Adolescent Psychiatry, 35, 343–351.

 Biederman, I., Keenan, K., & Faraone, S. V. (1990). Parent-based di-agnosis of attention deficit disorder predicts a diagnosis based
- agioss of attention tental usonate predicts a diagnosis cased on teacher report. American Journal of Child and Adolescent Psychiatry, 29, 698–701.
 Biederman, J., Milberger, S., Faraone, S. V., Guite, J., & Warburton, R. (1994). Associations between childhood asthma and ADHD: Issues of psychiatric comorbidity and familiality. Journal of the American Academy of Child and
- Adolescent Psychiatry, 33, 842–848.
 Biederman, J., Newcorn, J., & Sprich, S. (1991). Comorbidity of attention deficit hyperactivity disorder with conduct, depressive, anxiety, and other disorders. American Journal of Psychiatry, 148 564-577
- 146, 304-371.
 Biederman, J., Wilens, T., Mick, E., Spencer, T., & Faraone, S. V. (1999). Pharmacotherapy of attention-deficit/hyperactivity disorder reduces risk for substance use disorder. *Pediatrics*, 104-109
- Biederman, J., Wozniak, J., Kiely, K., Ablon, S., Faraone, S., Mick E., et al. (1995). CBCL clinical scales discriminate prepubertal children with structured-interview-derived diagnosis of mania

- children with structured-interview-derived diagnosis of mania from those with ADHD. Journal of the American Academy of Child and Adolescent Psychiatry, 34, 464–471.

 Bjur, P., Golding, J., Hashum, M., & Kurzon, M. (1989). Behavioral predictors of injury in school-age children. American Journal of Diseases of Children, 142, 1307–1312.

 Borger, N., & van der Meere, J. (2000). Visual behaviour of ADHD children during an attention test: An almost forgotten variable. Journal of Child Psychology and Psychiatry, 41, 525–532.

 Braaten, E. B., & Rosen, L. A. (2000). Self-regulation of affect in attention deficit hyperactivity disorder (ADHD) and non-ADHD boys: Differences in empathic responding. Journal of Consultine and Clinical Psychology. 68. Journal of Consulting and Clinical Psychology, 68,
- Breen, M. J. (1989). Cognitive and behavioral differences in ADHD boys and girls. *Journal of Child Psychology and Psychiatry*, 30, 711–716.
- Breslau, N., Brown, G. G., DelDotto, J. E., Kumar, S., Exhuthachan,
- Bestau, N., HOWD, O. J. Dell'Ollo, J. E., Nimat, S., Exhittachan, S., Andreski, P., et al. (1996). Psychiatric sequelae of low birth weight at 6 years of age. Journal of Abnormal Child Psychology, 24, 3854-400.
 Breton, J., Bergeron, L., Valla, J. P., Berthiaume, C., Gaudet, N., Lambert, J., et al. (1999). Quebec children mental health survey: Prevalence of DSM-III-R mental health disorders. Journal of Child December 10, 120-120.
- of Child Psychology and Psychiatry, 40, 375-384.

 Briggs-Gowan, M. J., Horwitz, S. M., Schwab-Stone, M. E.,

 Leventhal, J. M., & Leaf, P. J. (2000). Mental health in pediatric settings: Distribution of disorders and factors related to service use. Journal of the American Academy of Child and
- Adolescent Psychiatry, 39, 841-849.

 Bu-Haroon, A., Eapen, V., & Bener, A. (1999). The prevalence of hyperactivity symptoms in the United Arab Emirates. Nordic Journal of Psychiatry, 53, 439-442. Buhrmester, D., Camparo, L., Christensen, A., Gonzalez, L. S., &
- Hinshaw, S. P. (1992). Mothers and fathers interacting in dyads and triads with normal and hyperactive sons. *Developmental* Psychology, 28, 500-509.
 Burke, J. D., Loeber, R., & Lahey, B. B. (2001). Which aspects of
- ADHD are associated with tobacco use in early adolescence? Journal of Child Psychology and Psychiatry, 42, 493–502.
- Burks, H. (1960). The hyperkinetic child. Exceptional Children, 27,

- Burns, G. L., Boe, B., Walsh, J. A., Sommers-Flannagan, R., & Teegarden, L. A. (2001). A confirmatory factor analysis on the DSM-IV ADHD and ODD symptoms: What is the best model for the organization of tehse symptoms? Journal of Abnormal Child Psychology, 29, 339-349.

 Burns, G. L., & Walsh, J. A. (in press). The influence of ADHD-
- hyperactivity/impulsivity symptoms on the development of op-positional defiant disorder symptoms in a two-year longitudi-
- nal study. Journal of Abnormal Child Psychology.
 Burt, S. A., Krueger, R. F., McGue, M., & Iacono, W. G. (2001). Sources of covariation among attention deficit hyperactivity disorder, oppositional defiant disorder, and conduct disorder. The importance of shared environment. Journal of Abnormal
- Psychology, 110, 516-525.

 Cadesky, E. B., Mota, V. L., & Schachar, R. J. (2000). Beyond words: How do children with ADHD and/or conduct problems process nonverbal information about affect? Journal of the American Academy of Child and Adolescent Psychiatry, 39, 1160-1167. Cadoret, R. J., & Stewart, M. A. (1991). An adoption study of at-
- tention deficit/hyperactivity/aggression and their relationship to adult antisocial personality. Comprehensive Psychiatry, 32,
- Campbell, S. B. (1990). Behavior problems in preschool children. New York: Guilford.
- new fork: Guillotti.
 npbell, S. B., March, C. L., Pierce, E. W., Ewing, L. J., & Szumowski, E. K. (1991). Hard-to-manage preschool boys:
 Family context and the stability of externalizing behavior. Jour-
- nal of Abnormal Child Psychology, 19, 301-318.

 Campbell, S. B., Schleifer, M., & Weiss, G. (1978). Continuities in maternal reports and child behaviors over time in hyperactive and comparison groups. Journal of Abnormal Child Psychology, 6, 33-45.
- Campbell, S. B., Szumowski, E. K., Ewing, L. J., Gluck, D. S., & Breaux, A. M. (1982). A multidimensional assessment of parent-identified behavior problem toddlers. *Journal of Abnormal Child Psychology*, 10, 569–592.
- Cantwell, D. (1975). The hyperactive child. New York: Spectrum. Cantwell, D. P., & Baker, L. (1992). Association between attention deficit-hyperactivity disorder and learning disorders. In S. E. Shaywitz & B. A. Shaywitz (Eds.), Attention deficit disorder comes of age: Toward the twenty-first century (pp. 145-164). Austin, TX: Pro-ed.
- Carlson, C. L., Lahey, B. B., & Neeper, R. (1986). Direct assessment Carlson, C. L., Lahey, B. B., & Neeper, R. (1986). Direct assessment of the cognitive correlates of attention deficit disorders with and without hyperactivity. Journal of Behavioral Assessment and Psychopathology, 8, 69–86.
 Carlson, C. L., & Mann, M. (in press). Sluggish cognitive tempo pre-dicts a different pattern of impairment in the Attention Deficit Hyperactivity. Disorder, Predominantly Inattentive Type. Uni-
- versity of Texas at Austin.
 Carlson, C. L., & Tamm, L. (2000). Responsiveness of children with
- attention deficit hyperactivity disorder to reward and response cost: Differential impact on performance and motivation. Jour-
- nal of Consulting and Clinical Psychology, 68, 73–83.

 Carlson, C. L., Tamm, L., & Gaub, M. (1997). Gender differences in children with ADHD, ODD, and co-occurring ADHD/ODD identified in a school population. Journal of the American Academy of Child and Adolescent Psychiatry, 36, 1706-1714. Carlson, E. A., Jacobvitz, D., & Sroufe, L. A. (1995). A devel-
- opmental investigation of inattentiveness and hyperactivity. Child Development, 66, 37-54.
- Carlson, G. A. (1990). Child and adolescent mania—diagnostic considerations. Journal of Child Psychology and Psychiatry, 31,
- Carte, E. T., Nigg, J. T., & Hinshaw, S. P. (1996). Neuropsychological functioning, motor speed, and language processing in boys with and without ADHD. Journal of Abnormal Child Psychology,

- Casey, B. J., Castellanos, F. X., Giedd, J. N., Marsh, W. L., Hamburger, S. D., Schubert, A. B., et al. (1997). Implication of right frontstriatal circuitry in response inhibition and attention-deficit/hyperactivity disorder. Journal of the American Academy of Child and Adolescent Psychiatry, 36,
- Casey, J. E., Rourke, B. P., & Del Dotto, J. E. (1996). Learning disabilities in children with attention deficit disorder with and without hyperactivity. *Child Neuropsychology*, 2, 83-98.Casey, R. J. (1996). Emotional competence in children with ex-
- Cassy, A. J. (1990). Endotolial completed in Inductive Microbial Charles and Internalizing disorders. In M. Lewis & M. W. Sullivan (Eds.), Emotional development in atypical children (pp. 161–183), Mahwah, N.I. Erlbaum.
 Castellanos, F. X., Giedd, J. N., Eckburg, P., Marsh, W. L., Vaituzis,
- C., Kaysen, D., et al. (1994). Quantitative morphology of the caudate nucleus in attention deficit hyperactivity disorder.
- American Journal of Psychiatry, 151, 1791–1796.
 Castellanos, F. X., Giedd, J. N., Marsh, W. L., Hamburger, S. D., Vaituzis, A. C., Dickstein, D. P., et al. (1996). Quantitative brain magnetic resonance imaging in attention-deficit hyperactivity
- magnetic resonance imaging in attention-oencit hyperactivity disorder. Archives of General Psychiatry, 53, 601–616. Castellanos, F. X., Marvasti, F. F., Ducharme, J. L., Walter, J. M., Israel, M. E., Krain, A., et al. (2000). Executive function oculomotor tasks in girls with ADHD. Journal of the American Academy of Child and Adolescent Psychiatry, 39, 444, 556.
- Chadwick, O., Taylor, E., Taylor, A., Heptinstall, E., & Danckaerts, M. (1999). Hyperactivity and reading disability: A longitudinal study of the nature of the association. Journal of Child
- nal study of the nature of the association. Journal of Child Psychology and Psychiatry, 40, 1039–1050. ng. H. T., Klorman, R., Shaywitz, S. E., Fletcher, J. M., Marchione, K. E., Holahan, J.M., et al. (1999). Paired-associate learning in attention-deficit/hyperactivity disorder as a func-tion of hyperactivity-impulsivity and oppositional default sorder. Journal of Abnormal Child Psychology, 27, 237–245.
- Chess, S. (1960). Diagnosis and treatment of the hyperactive child.

 New York State Journal of Medicine, 60, 2379–2385.

 Chicoat, H. D., & Breslau, N. (1999). Pathways from ADHD to early drug use. Journal of the American Academy of Child and Adolescent Psychiatry, 38, 1347–1354.

 Chabot, R. J., & Serfontein, G. (1996). Quantitative electroen-
- Chaoot, R. J., & Serionteni, G. (1990). Quantitative telectronic cephalographic profiles of children with attention deficit dis-order. *Biological Psychiatry*, 40, 951–963.
 Chelune, G. J., Ferguson, W., Koon, R., & Dickey, T. O. (1986).
 Frontal lobe disinhibition in attention deficit disorder. *Child*
- Psychiatry and Human Development, 16, 221–234.

 Clark, C., Prior, M., & Kinsella, G. J. (2000). Do executive function deficits differentiate between adolescents with ADHD and oppositional defiant/conduct disorder? A neuropsychological study using the Six Elements Test and Hayling Sentence Completion Test. Journal of Abnormal Child Psychology, 28, 495–414. 405-414.
- Clark, M. L., Cheyne, J. A., Cunningham, C. E., & Siegel, L. S. (1988). Dyadic peer interaction and task orientation in attention-deficit-disordered children. *Journal of Abnormal*
- in attention-center-assistate cultures, Journal of Achido Child Psychology, 16, 1-15. Claude, D., & Firestone, P. (1995). The development of ADHD boys: A 12-year follow-up. Canadian Journal of Behavioural Science, 27, 226-249. Cohen, N. J., & Minde, K. (1983). The "hyperactive syndrome" in
- kindergarten children: Comparison of children with pervasive and situational symptoms. Journal of Child Psychology and Psychiatry, 24, 443–455.
- Cohen, N. J., Sullivan, J., Minde, K., Novak, C., & Keens, S. (1983). Mother-child interaction in hyperactive and normal (1763). Notice-thin interaction in hyperactive and non-in-kindergarten-aged children and the effect of treatment. Child Psychiatry and Human Development, 13, 213–224. Cohen, N. J., Vallance, D. D., Barwick, M., Im, N., Menna, R., Horodezky, N. B., et al. (2000). The interface between

- ADHD and language impairment: An examination of language, achievement, and cognitive processing. *Journal of Child Psychology and Psychiatry*, 41, 353–362.

 Comings, D. E. (2000). Attention deficit hyperactivity disorder
- with Tourette Syndrome. In T. E. Brown (Ed.), Attention-deficit disorders and comorbidities in children, adolescents, and adults (pp. 363-392). Washington, DC: American Psychiatric
- Comings, D. E., Comings, B. G., Muhleman, D., Dietz, G., Shahbahrami, B., Tast, D., et al. (1991). The dopamine D₂ receptor locus as a modifying gene in neuropsychiatric disorders. Journal of the American Medical Association, 266,
- Conners, C. K., & Wells, K. (1986). Hyperactive children: A neu
- ropsychological approach. Beverly Hills, CA: Sage.
 Conners, D. K. (1998). Other medications in the treatment of child Conners, D. K. (1998). Other medications in the treatment of clind and adolescent ADHD. In R. A. Barkley (Ed.), Attention deficit hyperactivity disorder: A handbook for diagnosis and treatment (pp. 564–581). New York: Guilford.
 Cook, E. H., Stein, M. A., Krasowski, M. D., Cox, N. J., Olkon, D. M., Kieffer, J. E., & Leventhal, B. L. (1995). Association of attention deficit disorder and the dopamine transporter gene.
- American Journal of Human Genetics, 56, 993–998. Cook, E. H., Stein, M. A., & Leventhal, D. L. (1997). Family-b
- Cook, E. H., Stein, M. A., & Levelinia, D. L. (1997). Failiny-ossed association of attention-deficit/hyperactivity disorder and the dopamine transporter. In K. Blum (Ed.), Handbook of Psychitic Genetics (pp. 297–310). New York: CRC Press.
 Coolidge, F. L., Thede, L. L., & Young, S. E. (2000). Heritability and the comorbidity of attention deficit hyperactivity disorder with behavioral disorders and executive function deficits: A preliminary investigation. Developmental Neuropsychology, 17, 273–287.
- 273-287.
 Corkum, P., Moldofsky, H., Hogg-Johnson, S., Humphries, T., & Tannock, R. (1999). Sleep problems in children with attention-deficit/hyperactivity disorder: Impact of subtype, comorbidity, and stimulant medication. Journal of the American Academy of Child and Adolescent Psychiatry, 38, 1285-1293.
 Costello, E. I., Loeber, R., & Stouthamer-Loeber, M. (1991). Pervasive and situational hyperactivity—Confounding effect of informant: A research note. Journal of Child Psychology and Psychiatry, 32, 367-376.
 Cruickshank, B. M., Eliason, M., & Mertifield, B. (1988). Long-term sequelae of water near-drowning. Journal of Pediatric Psychology, 13, 739-388.

- term sequelae of water near-drowning. Journal of Pediatric Psychology, 13, 379–388.

 Crystal, D. S., Ostrander, R., Chen, R. S., & August, G. J. (2001). Multimethod assessment of psychopathology among DSM-IV subtypes of children with attention deficit/hyperactivity disorder: Self., parent, and teacher reports. Journal of Abnormal Child Psychology, 29, 189–205.

 Cuffe, S. P., McKeown, R. E., Jackson, K. L., Addy, C. L., Abramson, R., & Garrison, C. Z. (2001). Prevalence of attention-deficit/hyperactivity disorder in a community sample of older adolescents. Journal of the American Academy of Child and Adolescent Psychiatry, 40, 1037–1044.

 Cunningham, C. E., Benness, B. B., & Siegel, L. S. (1988). Family functioning, time allocation, and parental depression in the
- functioning, time allocation, and parental depression in the families of normal and ADDH children. Journal of Clinical Child Psychology, 17, 169-177.
 Cunningham, C. E., & Siegel, L. S. (1987). Peer interactions of
- normal and attention-deficit disordered boys during free-play, cooperative task, and simulated classroom situations. *Journal*
- of Abnormal Child Psychology, 15, 247-268.

 Cunningham, C. E., Siegel, L. S., & Offord, D. R. (1985).

 A developmental dose response analysis of the effects of methylphenidate on the peer interactions of attention deficit disordered boys. Journal of Child Psychology and Psychiatry, 26, 955-971.
- Dane, A. V., Schachar, R. J., & Tannock, R. (2000). Does actigraphy differentiate ADHD subtypes in a clinical research setting

- Journal of the American Academy of Child and Adolescent Psychiatry, 39, 752-760. Danforth, J. S., Barkley, R. A., & Stokes, T. F. (1991). Observations
- of parent-child interactions with hyperactive children: Re-search and clinical implications. Clinical Psychology Review, 11.703-727
- Daugherty, T. K., & Quay, H. C. (1991). Response perseveration and delayed responding in childhood behavior disorders. Jour-nal of Child Psychology and Psychiatry, 32, 453-461.

 David, O. J. (1974). Association between lower level lead concen-
- trations and hyperactivity. Environmental Health Perspective, 7, 17–25.
- de la Burde, B., & Choate, M. (1972). Does asymptomatic lead exposure in children have latent sequelae? Journal of Pediatrics, 81. 1088-1091.
- de la Burde, B., & Choate, M. (1974). Early asymptomatic lead exposure and development at school age. Journal of Pediatrics,
- Demaray, M. K., & Elliot, S. N. (2001). Perceived social support by children with characteristics of attention-deficit/hyperactivity disorder. School Psychology Quarterly, 16, 68-90.
- Demb, H. B. (1991). Use of Ritalin in the treatment of children with mental retardation. In L. L. Greenhill & B. B. Osmon (Eds.), Ritalin: Theory and patient management (pp. 155–170). New York: Mary Ann Liebert. Denckla, M. B. (1994). Measurement of executive function. In G. R.
- Lyon (Ed.), Frames of reference for the assessment of learn disabilities: New views on measurement issues (pp. 117-142). Baltimore: Brookes.
- Baltimore: Brookes.
 Denckla, M. B., & Rudel, R. G. (1978). Anomalies of motor development in hyperactive boys. Annals of Neurology, 3, 231–233.
 Denckla, M. B., Rudel, R. G., Chapman, C., & Krieger, J. (1985).
 Motor proficiency in dyslexic children with and without attentional disorders. Archives of Neurology, 42, 228–231.
 Denson, R., Nanson, J. L., & McWatters, M. A. (1975). Hyperkinesis and maternal smoking. Canadian Psychiatric Association
- Journal, 20, 183–187.
 Dolphin, J. E., & Cruickshank, W. M. (1951). Pathology of concept
- formation in children with cerebral palsy. American Journal of Mental Deficiency, 56, 386–392.
- Douglas, V. I. (1972). Stop, look, and listen: The problem of sustained attention and impulse control in hyperactive and normal children. Canadian Journal of Behavioural Science, 4, 259-

- 282.

 Douglas, V. I. (1980). Higher mental processes in hyperactive children: Implications for training. In R. Knights & D. Bakker (Eds.), Treatment of hyperactive and learning disordered children (pp. 65–92). Baltimore: University Park Press.

 Douglas, V. I. (1983). Attention and cognitive problems. In M. Rutter (Ed.), Developmental neuropsychiatry (pp. 280–329), New York: Guilford.

 Douglas, V. I. (1999). Cognitive control processes in attention-deficit/hyperactivity disorder. In H. C. Quay & A. Horgan (Eds.), Handbook of disruptive behavior disorders (pp. 105–138), New York: Plenum. 138), New York; Plenum.
- Douglas, V. I., & Parry, P. A. (1983). Effects of reward on delayed
- Douglas, V. I., & Peters, K. (1958). Effects of treat on design and an analog Abnormal Child Psychology, 11, 313-326.
 Douglas, V. I., & Parry, P. A. (1994). Effects of reward and non-reward on attention and frustration in attention defict disorder. Journal of Abnormal Child Psychology, 22, 281-302.
 Douglas, V. I., & Peters, K. G. (1978). Toward a cleater definition.
- of the attentional deficit of hyperactive children. In G. A. Hale & M. Lewis (Eds.), Attention and the development of cognitive
- & M. Lewis (Eds.), Attention and the development of Cognitive skills (pp. 173–248). New York: Plenuin, Bauch, S. L., Madras, B. K., & Fischman, A. J. (1999). Dopamine transporter density in patients with attention deficit hyperactivity disorder. Lancet, 354, 2132-2133.

- Doyle, A. E., Faraone, S. V., DuPre, E. P., & Biederman, J. (2001). Doyle, A. E., Faraone, S. V., DuPre, E. P., & Biederman, J. (2001). Separating attention deficit hyperactivity disorder and learning disabilities in girls: A familial risk analysis. American Journal of Psychiatry, 158, 1666–1672.
 Draeger, S., Prior, M., & Sanson, A. (1986). Visual and auditory attention performance in hyperactive children: Competence or compliance. Journal of Abnormal Child Psychology, 14, 411-424.

- 4.24.
 J. (1991). Parent and teacher ratings of ADHD symptoms: Psychometric properties in a community-based sample. Journal of Clinical Child Psychology, 20, 245–253.
 DuPaul, G. J., & Barkley, R. A. (1992). Situational variability of attention problems: Psychometric properties of the Revised Home and School Situations Questionnaires. Journal of Clinical Child Psychology 21, 178, 188.
- ical Child Psychology, 21, 178–188.

 DuPaul, G. J., Barkley, R. A., & Connor, D. F. (1998). Stimulants. In R. A. Barkley (Ed.), Attention deficit hyperactivity disorder: A handbook for diagnosis and treatment (pp. 510–551). New York: Guilford.
- DuPaul, G. J., McGoey, K. E., Eckert, T. L., & VanBrakle, J. (2001). Preschool children with attention-deficit/hyperactivity disorder: Impairments in behavioral, social, and school functioning. Journal of the American Academy of Child and Adolescent Psychiatry, 40, 508-515.
- Dul'aul, G. J., Power, T. I., Anastopoulos, A. D., & Reid, R. (1999). The ADHD Rating Scale-IV: Checklists, norms, and clinical interpretation. New York: Guilford.
 Ebaugh, F. G. (1923). Neuropsychiatric sequelae of acute epidemic
- encephalitis in children. American Journal of Diseases of Chil-
- encephattis in catatrea. American Johnson. J. dren, 25, 89-97.
 Edelbrock, C. S., Costello, A., & Kessler, M. D. (1984). Empirical corroboration of attention deficit disorder. Journal of the American Academy of Child and Adolescent Psychiatry, 23, 285-290
- Edwards, F., Barkley, R., Laneri, M., Fletcher, K., & Metevia, L. (2001). Parent-adolescent conflict in teenagers with ADHD and ODD. Journal of Abnormal Child Psychology, 29, 557-572
- Elia, J., Gullotta, C., Rose, J. R., et al. (1994). Thyroid function in at-
- tention deficit hyperactivity disorder. Journal of the American Academy of Child and Adolescent Psychiatry, 33, 169–172.

 Epstein, J. N., Goldberg, N. A., Conners, C. K., & March, J. S. (1997). The effects of anxiety on continuous performance test functioning in an ADHD clinic sample. Journal of Attention Disorders, 2, 45-52.
- Erhardt, D., & Hinshaw, S. P. (1994). Initial sociometric impressions of attention-deficit hyperactivity disorder and comparison boys: Predictions from social behaviors and from nonbehavioral variables. Journal of Consulting and Clinical
- Psychology, 62, 833–842.

 Ernst, M., Cohen, R. M., Liebenauer, L. L., Jons, P. H., & Zametkin, A. J. (1997). Cerebral glucose metabolism in adolescent girls with attention-deficit/hyperactivity disorder. Journal of the American Acdemy of Child and Adolescent Psychiatry, 36, 1399-1406.
- Ernst, M., Liebenauer, L. L., King, A. C., Fitzgerald, G. A., Cohen, R. M., & Zametkin, A. J. (1994). Reduced brain metabolism in hyperactive girls. Journal of the American Academy of Child and Adolescent Psychiatry, 33, 858-868.
- Ernst, M., Zametkin, A. J., Matochik, J. A., Pascualvaca, D., Jons, P. H., & Cohen, R. M. (1999). High midbrain [18F]DOPA ac-
- cumulation in children with attention deficit hyperactivity dis-order. American Journal of Psychiatry, 156, 1209-1215.
 Fallone, G., Acebo, C., Arnedt, J. T., Seifer, R., Carskadon, M. A.
 (2001). Effects of acute sleep restriction on behavior, sustained attention, and response inhibition in children. Perceptual and Motor Skills, 93, 213-229.
- Faraone, S. V., & Biederman, J. (1997). Do attention deficit hy-peractivity disorder and major depression share familial risk

- factors? Journal of Nervous and Mental Disease, 185, 533-
- Faraone, S. V., Biederman, J., Chen, W. J., Krifcher, B., Keenan,
- K., Moore, C., et al. (1992). Segregation analysis of attention deficit hyperactivity disorder. *Psychiatric Genetics*, 2, 257–275. Faraone, S. V., Biederman, J., Lehman, B., Keenan, K., Norman, D., Seidman, L. J., et al. (1993). Evidence for the independent familial transmission of attention deficit hyperactivity disorder and learning disabilities: Results from a family genetic study.
- American Journal of Psychiatry, 150, 891-895.
 Faraone, S. V., Biederman, J., Mennin, D., Russell, R., & Tsuang, M. T. (1988). Familial subtypes of attention deficit hyperactivity disorder: A 4-year follow-up study of children from antisocial-ADHD families. *Journal of Child Psychology and*
- Paychiatry, 39, 1045–1053.
 Faraone, S. V., Biederman, J., Mick, E., Williamson, S., Wilens, T., Spencer, T., et al. (2000). Family study of girls with attention deficit hyperactivity disorder. American Journal of Psychiatry, 157, 1077-1083.

 Faraone, S. V., Biederman, J., & Monuteaux, M. C. (2001). Atten-
- tion deficit hyperactivity disorder with bipolar disorder in girls: Further evidence for a familial subtype? *Journal of Affective* Disorders, 64, 19-26.
 Faraone, S. V., Biederman, J., Weber, W., & Russell, R. L. (1998).
- Rolle, S. V., Bederland, J., Weber, W., & Russell, R. L. (1996).
 Psychiatric, neuropsychological, and psychosocial features of DSM-IV subtypes of attention-deficit/hyperactivity disorder:
 Results from a clinically referred sample. Journal of the American Academy of Child and Adolescent Psychiatry, 37, 185-193
- Faraone, S. V., Biederman, J., Weiffenbach, B., Keith, T., Chu, M. P.,
- Faraone, S. V., Biederman, J., Weiffenbach, B., Keith, T., Chu, M. P., Weaver, A., et al. (1999). Dopamine D4 gene 7-repeat allele and attention deficit hyperactivity disorder. American Journal of Psychiatry, 156, 768–770.
 Faraone, S. V., Biederman, J., Wozniak, J., Mundy, E., Mennin, D., & O'Donnell, D. (1997). Is comorbidity with ADHD a marker for juvenile-onset mania? Journal of the American Academy of Child and Adolescent Psychiatry, 36, 1046–1055.
 Fergusson, D. M., Fergusson, I. E., Horwood, L. J., & Kinzett, N. G. (1988). A longitudinal study of dentile lead leavest includence.
- (1988). A longitudinal study of dentine lead levels, intelligence, school performance, and behaviour. *Journal of Child Psychol-*
- school performance, and behaviour. Journal of Child Psychology and Psychiatry, 29, 811–824.

 Flipek, P. A., Semrud-Clikeman, M., Steingard, R. J., Renshaw, P. F., Kennedy, D. N., & Biederman, J. (1997). Volumetric MRI analysis comparing subjects having attention-deficit hyperactivity disorder with normal controls. Neurology, 45, 589–601.

 Fischer, M. (1990). Parenting stress and the child with attention deficit hyperactivity disorder. Journal of Clinical Child Psychology, 19, 337–346.

 Fischer, M., Barkley, R. A., Edelbrock, C. S., & Smallish, L. (1990).
- The adolescent outcome of hyperactive children diagnosed by research criteria: II. Academic, attentional, and neuropsychological status. Journal of Consulting and Clinical Psychology, 58, 580-588.
- Fischer, M., Barkley, R. A., Fletcher, K., & Smallish, L. (1993a). The stability of dimensions of behavior in ADHD and normal children over an 8 year period. Journal of Abnormal Child Psychology, 21, 315-337.
- Fischer, M., Barkley, R. A., Fletcher, K., & Smallish, L. (1993b). The adolescent outcome of hyperactive children diagnosed by research criteria: V. Predictors of outcome. *Journal of the* American Academy of Child and Adolescent Psychiatry, 32, 324-332
- Fischer, M., Barkley, R. A., Smallish, L., & Fletcher, K. R. (in press). Hyperactive children as young adults: Deficits in attention, inhibition, and response perseveration and their relationship to severity of childhood and current ADHD and conduct disor-der. Journal of Abnormal Psychology. Fischer, M., Barkley, R. A., Smallish, L., & Fletcher, K. R. (in press).
- Young adult outcome of hyperactive children as a function

- of severity of childhood conduct problems: Comorbid psychiatric disorders and interim mental health treatment. Journal of Abnormal Child Psychology.
- Fletcher, K., Fischer, M., Barkley, R. A., & Smallish, L. (1996). A seguential analysis of the mother-adolescent interactions of ADHD, ADHD/ODD, and normal teenagers during neutral and conflict discussions. Journal of Abnormal Child Psychology, 24, 271–298. ık, Y., & Ben-Nun, Y. (1988). Toward a clinical subgrouping
- of hyperactive and nonhyperactive attention deficit disorder: Results of a comprehensive neurological and neuropsychological assessment. American Journal of Diseases of Children, 142, 153-155
- Frank, Y., Lazar, J. W., & Seiden, J. A. (1992). Cognitive event-related potentials in learning-disabled children with or without attention-deficit hyperactivity disorder [Abstract]. Annals of
- attention-deficit hyperactivity disorder [Abstract]. Annats of Neurology, 32, 478.

 Frick, P. J., Kamphaus, R. W., Lahey, B. B., Loeber, R., Christ, M. A. G., Hart, E. L., et al. (1991). Academic underachievement and the disruptive behavior disorders. Journal of Consuling and Clinical Psychology, 59, 289-294.

 Gadow, K. D., Nolan, E. E., Litcher, L., Carlson, G. A., Panina, N., Golovakha, E., et al. (2000). Comparison of attention-deficit/hyperactivity disorder symptom subtypes in Ukrainian schoolchildren. Journal of the American Academy of Child and Abolescent Psychiatry, 39, 1520-1527.
- Adolescent Psychiatry, 39, 1520–1527.

 Garcia-Sanchez, C., Estevez-Gonzalez, A., Suarez-Romero, E., & Junque, C. (1997). Right hemisphere dysfunction in subjects with attention-deficit disorder with and without hyperactivity.
- Journal of Child Neurology, 12, 107-115.

 by M., & Carlson, C. L. (1997). Gender differences in ADHD: A meta-analysis and critical review. Journal of the American Academy of Child and Adolescent Psychiatry, 36, 1036-1045
- Geller, B., & Luby, J. (1997). Child and adolescent bipolar disorder:
- Geller, B., & Luby, J. (1997). Child and adolescent bipolar disorder:
 A review of the past IV years. Journal of the American Academy
 of Child and Adolescent Psychiatry, 36, 1168-1176.
 Giedd, J. N., Castellanos, F. X., Casey, B. J., Kozuch, P., King, A. C.,
 Hamburger, S. D., et al. (1994). Quantitative morphology of
 the corpus callosum in attention deficit hyperactivity disorder.
 American Journal of Psychiatry, 151, 665-669.
 Giedd, J. N., Snell, J. W., Lange, N., Rajapakse, J. C., Casey, B. J.,
 Kozuch, P. L., et al. (1996). Quantitative magnetic resonance
 imaging of human brain development: Ages 4-18. Cerebral
 Cortex, 6, 551-560.
 Gilger, J. W., Pennington, B. F., & DeFries, J. C. (1992). A twin study
- Gilger, J. W., Pennington, B. F., & DeFries, J. C. (1992). A twin study of the etiology of comorbidity: Attention-deficit hyperactivity disorder and dyslexia. Journal of the American Academy of
- Child and Adolescent Psychiatry, 31, 343-348.
 Gill, M., Daly, G., Heron, S., Hawi, Z., & Fitzgerald, M. (1997) Confirmation of association between attention deficit hyper-activity disorder and a dopamine transporter polymorphism.
- Molecular Psychiatry, 2, 311-313.
 Gillberg, C., Carlström, G., & Rasmussen, P. (1983). Hyperkinetic disorders in seven-year-old children with perceptual, motor and attentional deficits. Journal of Child Psychology and Psy-
- chiatry, 24(2), 233-246.

 Gillberg, C. (1983). Perceptual, motor and attentional deficits in Swedish primary school children. Some child psychiatric aspects. Journal of Child Psychology and Psychiatry, 24(3), Gillberg, I. C., & Gillberg, C. (1988). Generalized hyperkinesis: Follow-up study from age 7 to 13 years. Journal of the American Academy of Child and Adolescent Psychiatry, 27(1),
- 53-59. Gilberg, C., Melander, H., von Knorring, A.-L., Janols, L.-O., Thernlund, G., Hägglöf, B., et al. (1997). Long-term stimulant treatment of children with attention-deficit hyperactivity disorder symptoms. A randomized, double-blind, placebo-

- controlled trial. Archives of General Psychiatry, 54(9), 857-
- Gillis, J. J., Gilger, J. W., Pennington, B. F., & Defries, J. C. (1992).
 Attention deficit disorder in reading-disabled twins: Evidence for a genetic etiology. Journal of Abnormal Child Psychology, 20, 303-315
- Gitelman, R., & Eskinazi, B. (1983). Lead and hyperactivity revisited. Archives of General Psychiatry, 40, 827-833.
 Gittelman, R., Mannuzza, S., Shenker, R., & Bonagura, N. (1985).
 Hyperactive boys almost grown up: I. Psychiatric status. Archives of General Psychiatry, 42, 937-947.
 Gjone, H., Stevenson, J., & Sundet, J. M. (1996). Genetic in-
- fluence on parent-reported attention-related problems in a Norwegian general population twin sample. Journal of the American Academy of Child and Adolescent Psychiatry, 35, 588-596.
- Glone, H., Stevenson, J., Sundet, J. M., & Eilertsen, D. E. (1996). Changes in heritability across increasing levels of behavior problems in young twins. Behavior Genetics, 26, 419-426. Glow, P. H., & Glow, R. A. (1979). Hyperkinetic impulse disorder:
- CHOW, P. H., & CHOW, R. A. (1979). Hyperkinetic impulse disorder: A developmental defect of motivation. Genetic Psychological Monographs, 100, 159-231.
 Gomez, R., & Sanson, A. V. (1994). Mother-child interactions and noncompliance in hyperactive boys with and without conduct problems. Journal of Child Psychology and Psychiatry, 35, 477-400.
- Goodman, J. R., & Stevenson, J. (1989). A twin study of hyperactivity: II. The aetiological role of genes, family relationships, and perinatal adversity. *Journal of Child Psychology and Psychology* 20, 601, 709. chiatry, 30, 691-709.
- Grattan, L. M., & Eslinger, P. I. (1991). Frontal lobe damage in children and adults: A comparative review. Developmental Neuropsychology, 7, 283-326.
 Grenell, M. M., Glass, C. R., & Katz, K. S. (1987). Hyperactive
- children and peer interaction: Knowledge and performance of social skills. Journal of Abnormal Child Psychology, 15, 1-13.
- Gresham, F. M., MacMillan, D. L., Bocian, K. M., Ward, S. L., & Forness, S. R. (1998). Comorbidity of hyperactivity-impulsivity-inattention and conduct problems: Risk factors in social, affective, and academic domains. *Journal of Abnormal* Child Psychology, 26, 393-406.
 Grodzinsky, G. M., & Diamond, R. (1992). Frontal lobe functioning
- in boys with attention-deficit hyperactivity disorder. Develop-mental Neuropsychology, 8, 427-445. Gross-Tsur, V., Shaley, R. S., & Amir, N. (1991). Attention deficit disorder: Association with familial-genetic factors. Pediatric
- Neurology, 7, 258–261. Gruber, R., Sadeh, A., & Raviv, A. (2000). Instability of sleep patterns in children with attention-deficit/hyperactivity disorder.

 Journal of the American Academy of Child and Adolescent
 Psychiatry, 39, 495-501.

 Gustatsson, P., Thernlund, G., Ryding, E., Rosen, I., & Cederblad,
- M. (2000). Associations between cerebral blood-flow mea-sured by single photon emission computed tomorgraphy (SPECT), electro-encephalogram (EEG), behavior symp-toms, cognition and neurological soft signs in children with attention-deficit hyperactivity disorder (ADHD). Acta Puedi-atrica, 89, 830-835.
- Harnica, 89, 809-803. Harnlein, M., & Caul, W. F. (1987). Attention deficit disorder with hyperactivity: A specific hypothesis of reward dysfunction. Journal of the American Academy of Child and Adolescent Psychiatry, 26, 356-362.
- Halperin, J. M., & Gittelman, R. (1982). Do hyperactive children and their siblings differ in IQ and academic achievement? Psy-
- and then should have a substantial and the should have a chiatry Research, 6, 253-258.

 Halperin, J. M., Newcorn, J. H., Koda, V. H., Pick, L., McKay, K. E., & Knott, P. (1997). Nonadrenergic mechanisms in ADHD children with and without reading disabilities: A

- replication and extension. Journal of the American Academy of Child and Adolescent Psychiatry, 36, 1688-1697. Hamlett, K. W., Pellegrini, D. S., & Conners, C. K. (1987). An
- investigation of executive processes in the problem solving of attention deficit disorder-hyperactive children. Journal of Pediatric Psychology, 12, 227-240.
- Hart, E. L., Lahey, B. B., Loeber, R., Applegate, B., & Frick, P. J. (1995). Developmental changes in attention-deficit hyperac-
- tivity disorder in boys: A four-year longitudinal study. Journal of Abnormal Child Psychology, 23, 729-750.

 Hartsough, C. S., & Lambert, N. M. (1985). Medical factors in hyperactive and normal children: Prenatal, developmental, and health history findings. American Journal of Orthopsychiatry,
- 55, 190–210.
 Harvey, W. J., & Reid, G. (1997). Motor performance of children with attention-deficit hyperactivity disorder: A preliminary in-
- vestigation. Adapted Physical Activity Quarterly, 14, 189-202. Hastings, J., & Barkley, R. A. (1978). A review of psychophysiolog-
- ical research with hyperactive children. Journal of Abnormal Child Psychology, 7, 337-413.

 Hauser, P., Zametkin, A. J., Martinez, P., Vitiello, B., Matochik, J., Mixson, A., & Weintraub, B. (1993). Attention deficit hyperac-
- tivity disorder in people with generalized resistance to thyroid hormone. New England Journal of Medicine, 328, 997-1001.

 Heffron, W. A., Martin, C. A., & Welsh, R. J. (1984). Attention deficit disorder in three pairs of monozygotic twins: A case report. Journal of the American Academy of Child Psychiatry, 23, 299-301
- Heilman, K. M., Voeller, K. K. S., & Nadeau, S. E. (1991). A possible
- Heilman, K. M., Voeller, K. K. S., & Nadeau, S. E. (1991). A possible pathophysiological substrate of attention deficit hyperactivity disorder. Journal of Child Neurology, 6, 74-79.
 Hendren, R. L., De Backer, I., & Pandina, G. J. (2000). Review of neuroimaging studies of child and adolescent psychiatric disorders from the past 10 years. Journal of the American Academy of Child and Adolescent Psychiatry, 39, 815-828.
 Herpertz, S. C., Wenning, B., Mueller, B., Qunaibi, M., Sass, H., & Herpetz-Jahinann, B. (2001). Psychological responses in ADHD boys with and without conduct disorder: Implications for adult antisocial behavior. Journal of the American Academy of Child and Adolescent Psychiatry, 40, 1222-1236. of Child and Adolescent Psychiatry, 40, 1222-1230. shaw, S. P. (1987). On the distinction between attentional
- deficis/hyperactivity and conduct problems/aggression in deficis/hyperactivity and conduct problems/aggression in Hinshaw, S. P. (1992). Externalizing behavior problems and academic underachievement in childhood and adolescence: Causal relationships and underlying mechanisms. Psychologi-cal Bulletin, 111, 127–155.

 Hinshaw, S. P. (1994). Attention deficits and hyperactivity in children.
- Thousand Oaks, CA: Sage.

 Hinshaw, S. P. (2001). Is the inattentive type of ADHD a separate disorder? Clinical Psychology: Science and Practice, 8, 498–
- Hinshaw, S. P., Buhrmeister, D., & Heller, T. (1989). Anger control in response to verbal provocation: Effects of stimulant medication for boys with ADHD. Journal of Abnormal Child Psychology, 17, 393–408.
- Psychology, 17, 393-408.
 Hinshaw, S. P., Heller, T., & McHale, J. P. (1992). Covert antisocial behavior in boys with attention-deficit hyperactivity disorder: External validation and effects of methyl-phenidate. Journal of Consulting and Clinical Psychology, 60, 274-281.
 Hinshaw, S. P., & Melnick, S. M. (1995). Peer relationships in boys with attention-deficit hyperactivity disorder with and without comorbid aggression. Development and Psychopathology, 7, 627-647.
 Hinshaw, S. P., Morrison, D. C. Cotta, E. T. & Companies, C. (1982).
- Hinshaw, S. P., Morrison, D. C., Carte, E. T., & Cornsweet, C. (1987). Factorial dimensions of the Revised Behavior Problem Checklist: Replication and validation within a kindergarten sample. Journal of Abnormal Child Psychology, 15, 309-327. Hodgens, J. B., Cole, J., & Boldizar, J. (2000). Peer-based differences

- among boys with ADHD. Journal of Clinical Child Psychology, 29, 443–452.
- Hohman, L. B. (1922). Post-encephalitic behavior disorders in chil-

- Hohman, L. B. (1922). Post-encephalitic behavior disorders in children. Johns Hopkins Horpital Bulletin, 33, 372–375.
 Holdsworth, L., & Whitmore, K. (1974). A study of children with epilepsy attending ordinary schools: I. Their seizure patterns, progress, and behaviour in school. Developmental Medicine and Child Neurology, 16, 746–758.
 Hoy, E., Weiss, G., Minde, K., & Cohen, N. (1978). The hyperactive child at adolescence: Cognitive, emotional, and social functioning. Journal of Abnormal Child Psychology, 6, 311–324.
 Hoza, B., Pelham, W. E., Waschbusch, D. A., Kipp, H., & Owens, J. S. (2001). Academic task performance of normally achieving ADHD and control boys: Performance, self-evaluations, and attributions. Journal of Consulting and Clinical Psychology, 69, 271–283. 271-283.
- Humphries, T., Kinsbourne, M., & Swanson, J. (1978). Stimulant effects on cooperation and social interaction between hyper-
- effects on cooperation and social interaction between hyper-active children and their mothers Journal of Child Psychology and Psychiatry, 19, 13-22.

 Humphries, T., Koltun, H., Malone, M., & Roberts, W. (1994). Teacher-identified oral language difficulties among boys with attention problems. Developmental and Behavioral Pediatrics, 19, 92-98.
- Hynd, G. W., Hern, K. L., Novey, E. S., Eliopulos, D., Marshall, R., Gonzalez, J. J., et al. (1993). Attention-deficit hyperactivity
- R., Vonzaiez, J., et al. (1992). Attention-eneit hyperactivity disorder and asymmetry of the caudate nucleus. *Journal of Child Neurology*, 8, 339-347.

 Hynd, G. W., Lorys, A. R., Semrud-Clikeman, M., Nieves, N., Huettner, M. I. S., & Lahey, B. B. (1991). Attention deficit disorder without hyperactivity: A distinct behavioral and neurocognitive syndrome. *Journal of Child Neurology*, 6, 6221-624. S37-S43
- S37-S43.
 Hynd, G. W., Semrud-Clikeman, M., Lorys, A. R., Novey, E. S., & Eliopulos, D. (1990). Brain morphology in developmental dyslexia and attention deficit disorder/hyperactivity. Archives of Neurology, 47, 919-926.
 Hynd, G. W., Semrud-Clikeman, M., Lorys, A. R., Novey, E. S., Eliopulos, D., & Lyytinen, H. (1991). Corpus callosum morphology in attention deficit-hyperactivity disorder: Morphometric analysis of MRI. Journal of Learning Disabilities, 24, 141-146. 141-146.
- Jacobvitz, D., & Sroufe, L. A. (1987). The early caregiver-child relationship and attention-deficit disorder with hyperactivity in kindergarten: A prospective study. Child Development, 58, 1488-1495
- Jensen, P. S., Martin, D., & Cantwell, D. P. (1997). Comorbidity in ADHD: Implications for research, practice, and DSM-V. Journal of the American Academy of Child and Adolescent Psychiatry, 36, 1065-1079.

 Jensen, P. S., Shervette, R. E., Xenakis, S. N., & Bain, M. W. (1988).
- Psychosocial and medical histories of stimulant-treate
- Psychosocial and medical histories of stimulant-treated children. Journal of the American Academy of Child and Adolescent Psychiatry, 27, 798–801.
 Jensen, P. S., Shervette, R. E., III, Xenakis, S. N., & Richters, J. (1993). Anxiety and depressive disorders in attention deficit disorder with hyperactivity: New Findings. American Journal of Psychiatry, 150, 1203–1209.
 Jensen, P. S., Watanabe, H. K., Richters, J. E., Cortes, R., Roper, M. 84, 15, 65 (1905). Proceedings of the Proceedings
- M., & Liu, S. (1995). Prevalence of mental disorder in military children and adolescents: Findings from a two-stage commu-
- children and acolesseents: Findings from a two-stage commu-nity survey. Journal of the American Academy of Child and Adolescent Psychiatry, 34, 1514–1524.

 Johnson, B. D., Altmaier, E. M., & Richman, L. C. (1999). Attention deficits and reading disabilities: Are immediate mem-ory defects additive? Developmental Neuropsychology, 15, 213–226.
- Johnson, J. G., Cohen, P., Kasen, S., Smailes, E., & Brook, J. S. (2001). Association of maladaptive parental behavior with

- psychiatric disorder among parents and their offspring. Archives of General Psychiatry, 58, 453-460.

 Johnson, R. C., & Rosen, L. A. (2000). Sports behavior of ADHD children. Journal of Attention Disorders, 4, 150-160.

 Johnston, C. (1996). Parent characteristics and parent-child interac-
- tions in families of nonproblem children and ADHD children with higher and lower levels of oppositional-defiant disorder.

 Journal of Abnormal Child Psychology, 24, 85–104.

 Johnston, C., & Mash, E. J. (2001). Families of children with attention-deficit/hyperactivity disorder. Review and recom-
- mendations for future research. Clinical Child and Family Psy-chology Review, 4, 183-207.

 Johnstone, S. J., Barry, R. J., & Anderson, J. W. (2001). Topographic
- distribution and developmental timecourse of auditory eventrelated potentials in two subtypes of attention-deficit hyperac-tivity disorder. International Journal of Psychophysiology, 42,
- Kadesjö, B., & Gillberg, C. (1998). Attention deficits and clumsiness in Swedish 7-year-old children. Developmental Medicine and Child Neurology, 40, 796-811.
- Kadesjö, C., Kadesjö, B., Hägglöf, B., & Gillberg, C. (2001).

 ADHD in Swedish 3-7-year-old children. Journal of the
 American Academy of Child and Adolescent Psychiatry, 40(9),
- 1021-1028.
 Kadesjo, B., & Gillberg, C. (2001). The comorbidity of ADHD in the general population of Swedish school-age children. Journal of Child Psychology and Psychiatry, 42, 487-492.
 Kanbayashi, Y., Nakata, Y., Fujii, K., Kita, M., & Wada, K. (1994).
 ADHD-related behavior among non-referred children: Par-
- ents' ratings of DSM-III-R symptoms. Child Psychiatry and Human Development, 25, 13-29.
- Kaplan, B. J., McNichol, J. Conte, R. A., & Moghadam, H. K. (1987). Sleep disturbance in preschool-aged hyperactive and nonhyperactive children. *Pediatrics*, 89, 839-844.
 Keenan, K. (2000). Emotion dysregulation as a risk factor for child
- psychopathology. Clinical Psychology: Science and Practice, 7, 418–434.

- Kessler, J. W. (1980). History of minimal brain dysfunction. In H. Rie & E. Rie (Eds.), Handbook of minimal brain dysfunctions: A critical view (pp. 18–52). New York: Wiley.

 Klorman, R. (1992). Cognitive event-related potentials in attention deficit disorder. In S. E. Shaywitz & B. A. Shaywitz (Eds.), Attention deficit diorder comes of age: Toward the twenty-first century (pp. 221–244). Austin, TX: Pro-ed.

 Klorman, R., Salman, L. F., & Borgstedt, A. D. (1988). Brain event-related potentials in evaluation of cognitive deficits in attention deficit disorder and outcome of stimulant therapy. In L. Bloomingdale (Ed), Attention deficit disorder (Vol. 3, pp. 49–80). New York: Pergamon.

 Klorman, R., Hazel-Fernandez, H., Shaywitz, S. E., Fletcher, J. M., Marchione, K. E., Holahan, J. M., et al. (1999). Executive functioning deficits in attention-deficit/hyperactivity disorder are independent of oppositional defiant or reading disorder. Jour-sindependent of oppositional defant or reading disorder. Jour-sindependent of oppositional defant or reading disorder. Jour-
- independent of oppositional defiant or reading disorder. Jour-nal of the American Academy of Child and Adolescent Psychi-
- atry, 38, 1148-1155. Knobel, M., Wolman, M. B., & Mason, E. (1959). Hyperkinesis and organicity in children. Archives of General Psychiatry, 1, 310-321.
- Krause, K., Dresel, S. H., Krause, J., Kung, H. F., & Tatsch, K. (2000). Increased striatal dopamine transporter in adult patients with attention deficit hyperactivity disorder: Effects of methylphenidate as measured by single photon emission computed tomography. Neuroscience Letters, 285, 107-110
- 10.
 Kroes, M., Kalff, A. C., Kessels, A. G. H., Steyaert, J., Feron, F., van Someren, A., et al. (2001). Child psychiatric diagnoses in a population of Dutch schoolchildren aged 6 to 8 years. Journal of the American Academy of Child and Adolescent Psychiatry, 40, 1401–1409.

- Kuntsi, J., Oosterlaan, J., & Stevenson, J. (2001). Psychological Kuntsi, J., Oosterlaan, J., & Stevenson, J. (2001). Psychological mechanisms in hyperactivity: I. Response inhibition deficit, working memory impairment, delay aversion, or something else? Journal of Child Psychology and Psychiatry, 42, 199-210.
 Kuperman, S., Johnson, B., Arndt, S., Lindgren, S., & Wolraich, M. (1996). Quantitative EEG differences in a nonclinical sam-
- ple of children with ADHD and undifferentiated ADD. Jo nal of the American Academy of Child and Adolescent Psychiatry, 35, 1009–1017.
- any, 33, 1009-1017.
 Lahey, B. B. (2001). Should the combined and predominantly inattentive types of ADHD be considered distinct and unrelated disorders? Not now, at least. Clinical Psychology: Science and Practice, 8, 494-497.
- Lahey, B. B., Applegate, B., McBurnett, K., Biederman, J., Greenhill, L., et al. (1994). DSM-IV field trials for atten-
- tion deficit/hyperactivity disorder in children and adolescents.

 American Journal of Psychiatry, 151, 1673-1685.

 Lahey, B. B., & Carlson, C. L. (1992). Validity of the diagnostic category of attention deficit disorder without hyperactivity: A review of the literature. In S. E. Shaywitz & B. A. Shaywitz (Eds.), Attention deficit disorder comes of age: Toward the twenty-first century (pp. 119-144), Austin, T.X. Pro-C. Lahey, B. B., McBurnett, K., & Loeber, R. (2000). Are attention-
- deficit/hyperactivity disorder and oppositional defiant disorder developmental precursors to conduct disorder? In A. J. Sameroff, M. Lewis, & S. M. Miller (Eds.), Handbook of developmental psychopathology (2nd ed., pp. 431-446.). New York:
- Lahey, B. B., Pelham, W. E., Schaughency, E. A., Atkins, M. S., Murphy, H. A., Hynd, G. W., et al. (1988). Dimensions and types of attention deficit disorder with hyperactivity in chil-dren: A factor and cluster-analytic approach. Journal of the American Academy of Child and Adolescent Psychiatry, 27, 330-335
- Lahey, B. B., Schaughency, E., Hynd, G., Carlson, C., & Nieves, N. (1987). Attention deficit disorder with and without hyperactivity: Comparison of behavioral characteristics of clinic-referred children. Journal of the American Academy of Child Psychiatry, 26, 718-723.
- Lahey, B. B., Schaughency, E., Strauss, C., & Frame, C. (1984). Are attention deficit disorders with and without hyperactivity similar or dissimilar disorders? Journal of the American Academy
- of Child Psychiatry, 23, 302–309.

 Lahoste, G. J., Swanson, J. M., Wigal, S. B., Glabe, C., Wigal, T., King, N., et al. (1996). Dopamine D4 receptor gene polymorphism is associated with attention deficit hyperactivity disorder. Molecular Psychiatry, I, 121-124.
- ular Psychiatry, 1, 121-124.

 Lambert, N. M. (1988). Adolescent outcomes for hyperactive children. American Psychologist, 43, 786-799.

 Lambert, N. M., & Hartsough, C. S. (1998). Prospective study of tobacco smoking and substance dependencies among samples of ADHD and non-ADHD participants. Journal of Learning Disabilities, 31, 533-544.
- Lambert, N. M. (in press). Stimulant treatment as a risk factor for nicotine use and substance abuse. In P. S. Jensen & J. R. Cooper (Eds.), Diagnosis and treatment of attention deficit hyperactivity disorder: An evidence-based approach. New York: American
- Medical Association Press.

 Lambert, N. M., Sandoval, J., & Sassone, D. (1978). Prevalence of hyperactivity in elementary school children as a function of social system definers. American Journal of Orthopsychiatry, 48, 446-463.
- 48, 446-463.
 Lamminmaki, T., Ahonen, T., Narhi, V., Lyytinent, H., & de Barra, H. T. (1995). Attention deficit hyperactivity disorder subtypes: Are there differences in academic problems? Developmental Neuropsychology, 11, 297-310.
 Langsdorf, R., Anderson, R. F., Walchter, D., Madrigal, J. F., & Juarez, L. J. (1979). Ethnicity, social class, and perception of hyperactivity. Psychology in the Schools, 16, 293-298.

- Lapouse, R., & Monk, M. (1958). An epidemiological study of behavior characteristics in children. American Journal of Public Health, 48, 1134-1144. t, C. G., Hersen, M., Kazdin, A., Orvaschel, H., & Perrin,
- S. (1991). Anxiety disorders in children and their families.

 Archives of General Psychiatry, 48, 928-934.

 Laufer, M., Denhoff, E., & Solomons, G. (1957). Hyperkinetic im-
- pulse disorder in children's behavior problems. Psychosomatic
- Medicine, 19, 38-49.

 Lavigne, J. V., Gibbons, R. D., Christoffel, K., Arend, R., Rosenbaum, D., Binns, H., et al. (1996). Prevalence rates and correlates of psychiatric disorders among preschool children.

 Journal of the American Academy of Child and Adolescent
 Psychiatry, 35, 204–214.
- cendreux, M., Konofal, E., Bouvard, M., Falissard, B., Simeoni, M. M. (2000). Sleep and alertness in children with ADHD.
- Journal of Child Psychology and Psychiatry, 41, 803–812.
 Lerner, J. A., Inui, T. S., Trupin, E. W., & Douglas, E. (1985).
 Preschool behavior can predict future psychiatric disorders.
 Journal of the American Academy of Child Psychiatry, 24,
- Levin, P.M. (1938). Restlessness in children. Archives of Neurology
- Levin, P. M. (1938). Restlessness in children. Archives of Neurology and Psychiatry, 39, 764–770.
 Levy, F., & Hay, D. (2001). Attention, genes, and ADHD. Philadelphia, PA: Brunner-Routledge.
 Levy, F., Hay, D. A., McStephen, M., Wood, C., & Waldman, I. (1997). Attention-deficit hyperactivity disorder: A category of a continuum? Genetic analysis of a large-scale twin study. Journal of the American Academy of Child and Adolescent Psychiatry, 36, 737–744.
- Levy, F. & Hobbes, G. (1989). Reading, spelling, and vigilance in attention deficit and conduct disorder. *Journal of Abnormal*
- attention deficit and conduct distinct. Journal of Aonomic Child Psychology, 17, 291–298.

 Lewinsohn, P. M., Hops, H., Roberts, R. E., Seeley, J. R., & Andrews, J. A. (1993). Adolescent psychopathology: I. Prevalence and incidence of depression and other DSM-III-R disorders in high school students. Journal of Abnormal Psychology.
- chology, 102, 133-144. Liu, X., Kurita, H., Guo, C., Tachimori, H., Ze, J., & Okawa,
- Liu, X., Kurita, H., Guo, C., Tachimori, H., Ze, J., & Okawa, M. (2000). Behavioral and emotional problems in Chinese children: Teacher reports for ages 6 to 11. Journal of Child Psychology and Psychiatry, 41, 253–260.
 Loeber, R., Burke, J. D., Lahey, B. B., Winters, A., & Zera, M. (2000). Oppositional defant and conduct disorder: A review of the past 10 years, Part I. Journal of the American Academy of Child and Adolescent Psychiatry, 39, 1468–1484.
 Loeber, R., Green, S. M., Lahey, B. B., Christ, M. A. G., & Frick, P. J. (1992). Developmental sequences in the age of onset of disruptive child behaviors. Journal of Child and Family Studies, 1, 21–41.
- Loney, J., Kramer, J., & Milich, R. (1981). The hyperkinetic child grows up: Predictors of symptoms, delinquency, and achieve ment at follow-up. In K. Gadow & J. Loney (Eds.), Psychosocial aspects of drug treatment for hyperactivity. Boulder, CO:
- Westview Press.

 Loney, J., Kramer, J. R., & Salisbury, H. (in press). Medicated versus unmedicated ADHD children: Adult involvement with legal and illegal drugs. In P. S. Jensen & J. R. Cooper (Eds.), Diagnosis and treatment of attention deficit hyperactivity disorder. An evidence-based approach. New York: American Medical Association Press.
- Lorch, E. P., Milich, M., Sanchez, R. P., van den Broek, P., Baer, S., Hooks, K., et al. (2000). Comprehension of televised stories in bos with attention deficit/hyperactivity disorder and nonreferred boys. Journal of Abnormal Psychology, 109, 321-330
- Lou, H. C., Henriksen, L., & Bruhn, P. (1984). Focal cerebral hypoperfusion in children with dysphasia and/or attention deficit disorder. Archives of Neurology, 41, 825-829.

- Lou, H. C., Henriksen, L., Bruhn, P., Borner, H., & Nielsen, J. B. (1989). Striatal dysfunction in attention deficit and hyperkinetic disorder. Archives of Neurology, 46, 48–52.
 Luk, S. (1985). Direct observations studies of hyperactive behaviors. Journal of the American Academy of Child and Adolescent Psychiatry, 24, 338–344.
 Lynan, D., Moffitt, T., & Stouthamer-Loeber, M. (1993). Explaining the desirts behavior and the properties of the desirts of the properties.
- ing the relation between IQ and deliquency: Class, race, test motivation, school failure, or self-control? *Journal of Abnor-*mal Psychology, 102, 187-196.

 Madan-Swain, A., & Zentall, S. S. (1990). Behavioral comparisons
- of liked and disliked hyperactive children in play contexts and the behavioral accommodations by teir classmates. Journal of
- Consulting and Clinical Psychology, 58, 197-29.

 Maedgen, J. W., & Carlson, C. L. (2000). Social functioning and emotional regulation in the attention deficit hyperactivity disorder subtypess. Journal of Clinical Child Psychology, 29,
- Malone, M. A., & Swanson, J. M. (1993). Effects of methylphenidate on impulsive responding in children with attention deficit hy-peractivity disorder. *Journal of Child Neurology*, 8, 157-163.
- peractivity disorder. Journal of Chila Neurology, 6, 157-163. Mannuzza, S., & Gittelman, R. (1986). Informant variance in the diagnostic assessment of hyperactive children as young adults. In J. E. Barrett & R. M. Rose (Eds.), Mental disorders in the Community (pp. 243-254). New York: Guilford. Mannuzza, S., Klein, R., Bessler, A., Malloy, P., & LaPadula, M. (1993). Adult outcome of hyperactive boys: Educational achievement, occupational rank, and psychiatric status. Archives of General Experience, 96, 565-576.
- tional achievement, occupational rank, and psychiatric status.

 **Archives of General Psychiatry, 50, 565–576.

 **Mannuzza, S., Klein, R., Bessler, A., Malloy, P., & LaPadula,

 M. (1998). Adult psychiatric status of hyperactive boys grown

 up. **American Journal of Psychiatry, 155, 493–498.

 **Mannuzza, S., Klein, R. G., Bonagura, N., Malloy, P., Giampino,

 H., & Addalli, K. A. (1991). Hyperactive boys almost grown

 2. **Addalli, K. A. (1991). The properties boys almost grown of the properties of the properties
- up: Replication of psychiatric status. Archives of General Psychiatry, 48, 77-83.
- Mannuzza, S., & Klein, R. (1992). Predictors of outcome of children with attention-deficit hyperactivity disorder. In G. Weiss (Ed.), Child and adolescent psychiatric clinics of North America: Attention-deficit hyperactivity disorder (pp. 561–578). Philadelphia: Saunders.
- Marcotte, A. C., & Stern, C. (1997). Qualitative analysis of grapho-
- Marcotte, A. C., & Stern, C. (1997). Quantative analysis of grapho-motor output in children with attentional disorders. Child Neu-ropsychology, 3, 147–153.
 Mariani, M., & Barkley, R. A. (1997). Neuropsychological and aca-demic functioning in preschool children with attention deficit hyperactivity disorder. Developmental Neuropsychology, 13, 111–120. 111-129
- Marshall, R. M., Hynd, G. W., Handwerk, M. J., & Hall, J. (1997).
- Marshall, R. M., Hynd, G. W., Handwerk, M. J., & Hall, J. (1997).
 Academic underachievement in ADHD subtypes. Journal of Learning Disabilities, 30, 635-642.
 Mash, E. J., & Johnston, C. (1982). A comparison of mother-child interactions of younger and older hyperactive and normal chil-dren. Child Development, 53, 1371-1381.
 Mash, E. J., & Johnston, C. (1983a). Sibling interactions of hyper-active and normal children and their relationship to reports of maternal stress and self-esteem. Journal of Clinical Child Psychology 12, 91, 90.
- of maternal stress and sear-esteem. Journal of Cimical Child Psychology, 12, 91–99.
 Mash, E. J., & Johnston, C. (1983b). The prediction of mothers behavior with their hyperactive children during play and task situations. Child and Family Behavior Therapy, 5, 1–14.
 Mash, E. J., & Johnston, C. (1990). Determinants of parenting stress: Illustrations from families of hyperactive children and
- stress: Illustrations from tamilies of hyperactive children and families of physically abused children. Journal of Clinical Child Psychology, 19, 313–328.

 Mattes, J. A. (1980). The role of frontal lobe dysfunction in childhood hyperkinesis. Comprehensive Psychiatry, 27, 358–369.

 Matthys, W., Cuperus, J. M., & Van Engeland, H. (1999). Deficient cools are obligated in how with DBD/CD. with ADMD. social problem-solving in boys with ODD/CD, with ADHD,

- and with both disorders. Journal of the American Academy of Child and Adolescent Psychiatry, 38, 311-321.

 Matthys, W., van Goozen, S. H. M., de Vries, H., Cohen-Kettenis, P. T., & van Engeland, H. (1998). The dominance of behavioral activation over behavioural inhibition in conduct discrete the description of the property of the perfect of the perf ordered boys with or without attention deficit hyperactivity disorder. Journal of Child Psychology and Psychiatry, 39, 643-651
- McArdle, P., O'Brien, G., & Kolvin, I. (1995). Hyperactivity: Prev
- elence and relationship with conduct disorder. Journal of Child Psychology and Psychiatry, 36, 279–303.

 **Rôumett, K., Pfiffine, L. J., Willcutt, E., Tamm, L., Lerner, M., Ottolini, Y.L., et al. (1999). Experimental cross-validation of DSM-IV types of attention deficit/hyperactivity disorder. Journal of the American Academy of Child and Adolescent
- Psychiatry, 38, 17-24. McBurnett, K., Pfiffner, L. J., & Frick, P. J. (2001). Symptom proper-
- McBurnett, K., Pfifiner, L. J., & Frick, P. J. (2001). Symptom properties as a function of ADHD type: An argument for continued study of sluggish cognitive tempo. Journal of Abnormal Child Psychology, 29, 207–213.
 McGee, R., Fechan, M., Williams, S., Partridge, F., Silva, P. A., & Kelly, J. (1990). DSM-III disorders in a large sample of adolescents. Journal of the American Academy of Child and Adolescent Psychiatry, 29, 611–619.
 McGee, R., Stanton, W. R., & Sears, M. R. (1993). Allergic disorders and attention deficit disorder in children. Journal of Abnormal
- and attention deficit disorder in children. Journal of Abnormal
- and attention deficit disorder in children. Journal of Abnormal Child Psychology, 21, 79-88.

 McGee, R., Williams, S., & Feehan, M. (1992). Attention deficit disorder and age of onset of problem behaviors. Journal of Abnormal Child Psychology, 20, 487-502.

 McGee, R., Williams, S., & Silva, P. A. (1984). Behavioral and developmental characteristics of aggressive, hyperactive, and aggressive-hyperactive boys. Journal of the American Academy of Child Psychiatry, 23, 270-279.

 McMohan, S. A., & Greenberg, L. M. (1977). Serial neurologic examination of hyperactive children. Pediatrics, 59, 584-587.

 Melnick, S. M., & Hinshaw, S. P. (1996). What they want and what they get: The social goals of boys with ADHD and comparison boys. Journal of Abnormal Child Psychology, 24, 169-185.

- Melnick, S. M., & Hinshaw, S. P. (2000). Emotion regulation and parenting in AD/HD and comparison boys: Linkages with so-cial behaviors and peer preference. Journal of Abnormal Child Psychology, 28, 73–86.
- Mick F. Biederman, J. & Faraone, S. V. (1996), Is season of birth a risk factor for attention-deficit hyperactivity disorder? Journal of the American Academy of Child and Adolescent Psychiatry,
- Milberger, S., Biederman, J., Faraone, S. V., Chen, L., & Jones, J. (1996a). Is maternal smoking during pregnancy a risk factor for attention deficit hyperactivity disorder in children? *American*
- attention eisent in peractivity cusorder in children? American Journal of Psychiatry, 135, 1138-1142. Milberger, S., Biederman, J., Farsone, S. V., Chen, L., & Jones, J. (1996b). ADHD is associated with early initiation of cigarette smoking in children and adolescents. Journal of the American
- Academy of Child and Adolescent Psychiatry, 36, 37-44.
 Milich, R., Hartung, C. M., Matrin, C. A., & Haigler, E. D. (1994). Behavioral disinhibition and underlying processes in adolescents with disruptive behavior disorders. In D. K. Routh (Ed.), Disruptive behavior disorders in childhood (pp. 109-138). New York: Plenum Press.
- Milich, R., Lynam, D., & Ballentine, A. C. (2001). ADHD Combined Type and ADHD Predominantly Inattentive Type are distinct and unrelated disorders. Clinical Psychology: Science and Practice 8 463-488
- Minde, K., Webb, G., & Sykes, D. (1968). Studies on the hyperac tive child: VI. Prenatal and perinatal factors associated with hyperactivity. Developmental Medicine and Child Neurology, 10 355-363

- Mitchell E. A. Aman, M. G., Turbott, S. H., & Manku, M. (1987).
- Mitchell, E. A., Aman, M. G., Turtott, S. H., & Manku, M. (1987).
 Clinical characteristics and serum essential fatty acid levels in hyperactive children. Clinical Pediatrics, 26, 406–411.
 Mitsis, E. M., McKay, K. E., Schulz, K. P., Newcorn, I. H., & Halperin, J. M. (2000). Parent-teacher concordance in DSM-IV attention-deficit/hyperactivity disorder in a clinic-referred control. Pages 16, 164, April 2016. sample. Journal of the American Academy of Child and Adolescent Psychiatry, 39, 308-313.
- Moffitt, T. E. (1990). Juvenile delinquency and attention deficit disorder: Boys' developmental trajectories from age 3 to 15.
- Child Development, 61, 893-910.
 Molina, B. S. G., & Pelham, W. E. (2001). Substance use, substance abuse, and LD among adolescents with a childhood history of ADHD. Journal of Learning Disabilities, 34, 333-342.

 Molina, B. S. G., Smith, B. H., & Pelham, W. E. (1999). Interactive
- effects of attention deficit hyperactivity disorder and conduct disorder on early adolescent substance use. Psychology of Addictive Behavior, 13, 348-358.
- Monastra, V. J., Lubar, J. F., & Linden, M. (2001). The development of quantitative a electroencephalographic scanning process for
- of quantitative a electroencephalographic scanning process for attention deficit-hyperactivity disorder: Reliability and validity studies. Neuropsychology, 15, 136-144.

 Mori, L., & Peterson, L. (1995). Knowledge of salety of high and low active-impulsive boys: Implications for child injury prevention. Journal of Clinical Child Psychology, 24, 370-376.

 Morgan, A. E., Hynd, G. W., Riccio, C. A., & Hall, J. (1996). Validity of DSM-IV predominantly inattentive and combined types: Relationship to previous DSM diagnoses/subtype differences. Journal of the American Academy of Child and Adolescent Journal of the American Academy of Child and Adolescent Psychiatry, 35, 325-333.

 Morrison, J., & Stewart, M. (1973). The psychiatric status of the
- Morrison, J., & Stewart, M. (1973). The psychiatric status of the legal families of adopted hyperactive children. Archives of General Psychiatry, 28, 888–891.

 Murphy, K. R., & Barkley, R. A. (1996a). Prevalence of DSM-IV symptoms of ADHD in adult licensed drivers: Implications for
- symptoms of ADHD in adult licensed drivers: Implications for clinical diagnosis. Journal of Attention Disorders, 1, 147-161.
 Murphy, K. R., & Barkley, R. A. (1996b). Attention deficit hyperactivity disorder in adults: Comorbidities and adaptive impairments. Comprehensive Psychiatry, 37, 393-401.
 Murphy, K. R., Barkley, R. A., & Bush, T. (2001). Executive functioning and olfactory identification in young adults with attention deficit hyperactivity disorder. Neuropsychology, 15, 211-220.
- 211-220.
 Nada-Raja, S., Langley, J. D., McGee, R., Williams, S. M., Begg, D. J., & Reeder, A. I. (1997). Inattentive and hyperactive behaviors and driving offenses in adolescence. Journal of the American Academy of Child and Adolescent Psychiatry, 36, 515-522
- Needleman, H. L., Gunnoe, C., Leviton, A., Reed, R., Peresie, H., & Maher, C., et al. (1979). Deficits in psychologic and classroom Maher, C., et al. (1975). Deficiels in psychologic and classifolding performance of children with elevated dentine lead levels. New England Journal of Medicine, 300, 689–695.
 dleman, H. L., Schell, A., Bellinger, D. C., Leviton, L., & Alfred, E. D. (1990). The long-term effects of exposure to low doses of
- lead in childhood: An 11-year follow-up report. New England Journal of Medicine, 322, 83-88.
- Newton, J. H., Halperin, J. M., Jensen, P. S., Abikoff, H. B., Arnold, L. E., Cantwell, D. P., et al. (2001). Symptom profiles in children with ADHD: Comorbidity and gender. Journal of the American Academy of Child and Adolescent Psychiatry, 40,
- 157-140. Nichols, P. L., & Chen, T. C. (1981). Minimal brain dysfunction: A prospective study. Hillsdale, NJ: Erlbaum. Nigg, J. T. (1999). The ADHD response inhibition deficit as mea-
- sured by the stop task: Replication with DSM-IV Combined Type, extension, and qualification. Journal of Abnormal Child
- Psychology, 27, 393-402.

 Nigg, J. T. (2000). On inhibition/disinhibition in developmental psychopathology: Views from cognitive and personality

- psychology and a working inhibition taxonomy. Psychological Bulletin, 126, 220–246.

 Nigg, J. T. (2001). Is ADHD an inhibitory disorder? Psychological
- Bulletin, 125, 571-596
- Bulletin, 125, 571–596.
 Nigg, J. T., Blaskey, L. G., Huang-Pollock, C. L., & Rappley, M. D. (2002). Neuropsychological executive functions in DSM-IV ADHD subtypes Journal of the American Academy of Child and Adolescent Psychiatry, 41, 59–61.
 Nucci, L. P., & Herman, S. (1982). Behavioral disordered children's conceptions of moral, conventional, and personal issues. Jounal of Abnormal Child Psychology, 10, 411–426.
 Nigg, J. T., Hinshaw, S. P., Carte, E. T., & Treuting, J. J. (1998). Neuropsychological correlates of childhood attention-deficit/hyperactivity disorder: Explainable by comorbid disrutive behavior or reading problems? Journal of Abnormal
- ruptive behavior or reading problems? Journal of Abnormal Psychology, 107, 468-480.

 Nolan, E. E., Gadow, K. D., & Sprafkin, J. (2001). Teacher reports of DSM-IV ADHD, ODD, and CD symptoms in schoolchildren.
- Journal of the American Academy of Child and Adolescent Psychiatry, 40, 241–249.

 O'Connor, M., Foch, T., Sherry, T., & Plomin, R. (1980). A twin study of specific behavioral problems of socialization as viewed by parents. Journal of Abnormal Child Psychology, 8, 189-199
- O'Dougherty, M., Nuechterlein, K. H., & Drew, B. (1984). Hyperactive and hypoxic children: Signal detection, sustained attention, and behavior. *Journal of Abnormal Psychology*, 93, 178-
- O'Leary, K. D., Vivian, D., & Nisi, A. (1985). Hyperactivity in Italy.
- Gleary, K. D., Vivian, D., & Nisi, A. (1985). Hyperactivity in Italy. Journal of Ahnormal Child Psychology, 13, 485–500.Olson, S. L., Bates, J. E., Sandy, J. M., & Lanthier, R. (2000). Early developmental precursors of externalizing behavior in middle childhood and adolescence. Journal of Ahnormal Child Psy-
- childhood and aonescence. Journal of Frontina Child Lychology, 28, 119–133.

 Olson, S. L., Schilling, E. M., & Bates, J. E. (1999). Measurement of impulsivity: Construct coherence, longitudinal stability, and relationship with externalizing problems in middle childhood and adolescence. Journal of Abnormal Child Psychology, 27,
- 131-105.
 Oosterlaan, J., Logan, G. D., & Sergeant, J. A. (1998). Response inhibition in AD/HD, CD, comorbid AD/HD+CD, anxious, and control children: A meta-analysis of studies with the Stop Task. Journal of Child Psychology and Psychiatry, 39, 411-425.
- Oosterlaan, J., Scheres, A., & Sergeant, J. A. (in press). Verbal fluency, working memory, and planning in children with ADHD, ODD/CD, and comorbid ADHD+ODD/CD: Specificity of executive functioning deficits. Journal of Abnormal Psychology.
- Palfrey, J. S., Levine, M. D., Walker, D. K., & Sullivan, M. (1985). The emergence of attention deficits in early childhood: A prospective study. Developmental and Behavioral Pediatrics, 6 339-348
- Parry, P. A., & Douglas, V. I. (1983). Effects of reinforcement
- on concept identification in hyperactive children. Journal of Abnormal Child Psychology, 11, 327–340.

 Patterson, G. R., Degarmo, D. S., & Knutson, N. (2000). Hyperactive and antisocial behaviors: Comorbid or two points in the same process. Development and Psychopathology, 12, 91-106. ils, D. L. (1991). Genetic factors in the expression of attention-
- Fauls, D. L. (1991). Genetic factors in the expression of attention-deficit hyperactivity disorder. Journal of Child and Adolescent Psychopharmacology, 1, 353–360.

 Pauls, D. L., Hurst, C. R., Kidd, K. K., Kruger, S. D., Leckman, J. F., & Cohen, D. J. (1986). Tourette syndrome and attention deficit disorder: Evidence against a genetic relationship. Archives of General Psychiatry, 43, 1177–1179.
- Pelham, W. E., Jr. (2001). Are ADHD/I and ADHD/C the same or different? Does it matter? Clinical Psychology: Science and Practice, 8, 502-506.

- Pelham, W. E., Gnagy, E. M., Greenslade, K. E., & Milich, R. (1992). Teacher ratings of DSM-III-R symptoms for the disruptive behavior disorders. Journal of the American Academy of Child and Adolescent Psychiatry, 31, 210-218.
- Pelham, W. E., & Lang, A. R. (1993). Parental alcohol consumption and deviant child behavior: Laboratory studies of reciprocal effects. Clinical Psychology Review, 13, 763–784.
 Pennington, B. F., & Ozonoff, S. (1996). Executive functions and
- developmental psychopathology. Journal of Child Psychology and Psychiatry, 37, 51-87.
- Peterson, B. S., Pine, D. S., Cohen, P., & Brook, J. S. (2001).
 Prospective, longitudinal study of tic, obsessive-compulsive, and attention-deficit/hyperactivity disorders in an epidemio-logical sample. Journal of the American Academy of Child and
- Adolescent Psychiatry, 40, 685-695.
 Pfiffner, L. J., McBurnett, K., & Rathouz, P. J. (2001). Father ab-
- Pfiffner, L. J., McBurnett, K., & Rathouz, P. J. (2001). Father absence and familial antisocial characteristics. *Journal of Abnormal Child Psychology*, 29, 357–367.
 Pike, A., & Piomin, R. (1996). Importance of nonshared environmental factors for childhood and adolescent psychopathology. *Journal of the American Academy of Child and Adolescent Psychiatry*, 35, 560–570.
 Pillow, D. R., Pelham, W. E., Jr., Hoza, B., Molina, B. S. G., & Stultz, C. H. (1998). Confirmatory factor analyses examining attention deficil hyperactivity disorder symptoms and other approach of the property of the
- stutz, C. H. (1956). Comminatory tactual arrayses examinated at tention deficit hyperactivity disorder symptoms and other childhood disruptive behaviors. *Journal of Abnormal Child Psychology*, 26, 293–399.
 Pineda, D., Ardila, A., Rosselli, M., Arias, B. E., Henao, G. C., Gomex, L. F., et al. (1999). Prevalence of attention-deficit (hyperactivity disorder symptoms in 4- to 17-year old children; the secret accounts in concentrative contents. children in the general population. Journal of Abnormal Child Psychology, 27, 455-462. Pliszka, S. R. (1992). Comorbidity of attention-deficit hyperactivity
- disorder and overanxious disorder. Journal of the American Academy of Child and Adolescent Psychiatry, 31, 197-203. Pliszka, S. R., Liotti, M., & Woldorff, M. G. (2000). Inhibitory control in children with attention-deficit/hyperactivity disorder.
- trol in children with attention-defict/hyperactivity disorder: Event-related potentials identify the processing component and timing of an impaired right-frontal response-inhibition mechanism. Biological Psychiatry, 48, 238-246.

 Pliszka, S. R., McCracken, J. T., & Mass, J. W. (1996). Cate-cholamines in attention deficit hyperactivity disorder: Current perspectives. Journal of the American Academy of Child and Adolescent Psychiatry, 33, 264-272.

 Plomin, R. (1995). Genetics and children's experiences in the fam-ily Journal of Child Psychology and Psychiatry, 36, 33-68.
- min, K. (1993). Genetics and children's experiences in the fam-ily. Journal of Child Psychology and Psychiatry, 36, 33-68. rino, L. J., Rapoport, J. L., Behar, D., Sceery, W., Ismond, D. R., & Bunney, W. E., Jr. (1983). A naturalistic assessment of the motor activity of hyperactive boys. Archives of General Psychiatry, 40, 681-687.
- Quay, H. C. (1997). Inhibition and attention deficit hyperactivity disorder. *Journal of Abnormal Child Psychology*, 25, 7 - 13
- Rabiner, D., Coie, J. D., and the Conduct Problems Prevention Research Group. (2000). Early attention problems and children's reading achievement: A longitudinal investigation. Journal of the American Academy of Child and Adolescent Psychiatry, 39, 859–867.
- Rapoport, J. L., Buchsbaum, M. S., Zahn, T. P., Weingarten, H., Ludlow, C., & Mikkelsen, E. J. (1978). Destroamphetamine: Cognitive and behavioral effects in normal prepubertal boys. Science, 199, 560-563.
- Science, 199, 560-563.
 Rapoport, J. L., Donnelly, M., Zametkin, A., & Carrougher, J. (1986). "Situational hyperactivity" in a U.S. clinical setting. Journal of Child Psychology and Psychiatry, 27, 639-646.
 Rapport, M. D., Scanlan, S. W., & Denney, C. B. (1999). Attention-deficit/hyperactivity disorder and scholastic achievement: A confection of the development of achievement and achievement achievement and achievement achievement and achievement achievement
- model of dual developmental pathways. Journal of Child Psychology and Psychiatry, 40, 1169-1183.

- Rapport, M. D., Tucker, S. B., DuPaul, G. J., Merlo, M., & Stoner, G. Rapport, M. D., Iucker, S. B., Duraul, G. J., Merlo, M., & Stöner, G. (1986). Hyperactivity and frustration: The influence of control over and size of rewards in delaying grafification. *Journal of Abnormal Child Psychology*, 14, 181–204.
 Raskin, L. A. Shaywitz, S. E., Shaywitz, B. A., Anderson, G. M., & Cohen, D. J. (1984). Neurochemical correlates of attention deficit disorder. *Pediatric Clinics of North America*, 31, 387–306.
- Rasmussen, P., & Gillberg, C. (2001). Natural outcome of ADHD with developmental coordination disorder at age 22 years: A controlled, longitudinal, community-based study. Journal of the American Academy of Child and Adolescent Psychiatry, 39, 1424-1431.
- Rhee, S. H., Waldman, I. D., Hay, D. A., & Levy, F. (1995). Sex differences in genetic and environmental influences on DSM-III-R attention-deficit hyperactivity disorder (ADHD). Behavior Genetics, 25, 285.
- Richman, N., Stevenson, J., & Graham, P. (1982). Preschool to school: A behavioural study. New York: Academic Press.
- Roberts, M. A. (1990). A behavioral observation method for dif-
- Roberts, M. A. (1990). A Generative and aggressive boys. Journal of Abnormal Child Psychology, 18, 131–142.
 Rohde, L. A., Biederman, J., Busnello, E. A., Zimmermann, H., Schmitz, M., Martins, S., et al. (1999). ADHD in a school sample of Brazilian adolescents: A study of prevalence, cosample of Infantal adolescents. A study of province, Co-morbid conditions, and impairments. Journal of the American Academy of Child and Adolescent Psychiatry, 38, 716–722. Roizen, N. J., Blondis, T. A., Irwin, M., & Stein, M. (1994). Adap-tive functioning in children with attention-deficit hyperactivity
- disorder. Archives of Pediatric and Adolescent Medicine, 148,
- Romano, E., Tremblay, R. E., Vitaro, F., Zoccolillo, M., and Pagani, L. (2001). Prevalence of psychiatric diagnoses and the role of perceived impairment: Findings from and adolescent community sample. Journal of Child Psychology and Psychia-try, 42, 451–462.
- Roth, N., Beyreiss, J., Schlenzka, K., & Beyer, H. (1991). Coincidence of attention deficit disorder and atopic disorders in children: Empirical findings and hypothetical background. Journal
- dren: Empirical Indings and hypothetical background. Journal of Abnormal Child Psychology, 19, 1-13.
 Rothenberger, A. (1995). Electrical brain activity in children with hyperkinetic syndrome: Evidence of a frontal cortical dysfunction. In J. A. Sergeant (Ed.), Eunethydis: European approaches to hyperkinetic disorder (pp. 255-270). Amsterdam: Author.
 Routh, D. K., & Schroeder, C. S. (1976). Standardized playroom measures as indices of hyperactivity. Journal of Abnormal Child Psychology, 4, 190-207.
- Child Psychology, 4, 199-207. Rubia, K., Overmeyer, S., Taylor, E., Brammer, M., Williams, S. C. R., Simmons, A., & Bullmore, E. T. (1999). Hypofrontality in attention deficit hyperactivity disorder during higher-order motor control: A study with functional MRI. American Journal of Psychiatry, 156, 891-896. Rucklidge, J. J., & Tannock, R. (2001). Psychiatric, psychosocial, and cognitive functioning of female adolescents with ADHD.
- Journal of the American Academy of Child and Adolescent Psychiatry, 40, 530-540.
- Russo, M. F., & Beidel, D. C. (1994). Comorbidity of childhood anxiety and externalizing disorders: Prevalence, associated characteristics, and validation issues. Clinical Psychology Review, 14, 199-221.
- Rutter, M. (1977). Brain damage syndromes in childhood: Concepts and findings. Journal of Child Psychology and Psychiatry, 18,
- 1-21. Sachs, G. S., Baldassano, C. F., Truman, C. J., & Guille, C. (2000). Comorbidity of attention deficit hyperactivity disorder with early- and late-onset bipolar disorder. American Journal of Psychiatry, 157, 466-468. Samuel, V. J., George, P., Thornell, A., Curtis, S., Taylor, A., Brome, D., et al. (1999). A pilot controlled family study

- of DSM-III-R and DSM-IV ADHD in African-American on Down-III. and Down-II. ADM III. Almont Almont in thildren. Journal of the American Academy of Child and Adolescent Psychiatry, 38, 34–39.
 Sanchez, R. P., Lorch, E. P., Milich, R., & Welsh, R. (1999). Comprehension of televised stories in preschool children with ADHD.
- Journal of Clinical Child Psychology, 28, 376–385. Satterfield, J. H., Hoppe, C. M., & Schell, A. M. (1982). A prospective study of delinquency in 110 adolescent boys with attention deficit disorder and 88 normal adolescent boys. American Journal of Psychiatry, 139, 795-798.

 Schachar, R. J., & Logan, G. D. (1990). Impulsivity and inhibitory
- control in normal development and childhood psychopathology. Developmental Psychology, 26, 710-720.
- Schachar, R., Rutter, M., & Smith, A. (1981). The characteristics of situationally and pervasively hyperactive children: Implications for syndrome definition. Journal of Child Psychology and Psychiatry, 22, 375–392.
- Schachar, R. J., Tannock, R., & Logan, G. (1993). Inhibitory control, impulsiveness, and attention deficit hyperactivity disorder. Clinical Psychology Review, 13, 721–740.
 Schachar, R., Taylor, E., Weiselberg, M., Thorley, G., & Rutter,
- M. (1987). Changes in family function and relationships in children who respond to methylphenidate. *Journal of the American* Academy of Child and Adolescent Psychiatry, 26, 728-732. Scheres, A., Oosterlaan, J., & Sergeant, J. A. (2001). Response ex-
- ecution and inhibition in children with AD/HD and other dis-ruptive disorders: The role of behavioural activation. Journal
- of Child Psychology and Psychiatry, 42, 347–357.
 Schleifer, M., Weiss, G., Cohen, N. J., Elman, M., Cvejic, H., & Kruger, E. (1975). Hyperactivity in preschoolers and the effect of methylphenidate. American Journal of Orthopsychiatry, 45, 38-50.
- Schothorst, P. F., & van Engeland, H. (1996). Long-term behavioral
- Schothorst, F. F., & van Engeland, H. (1996). Long-term behavioral sequelae of prematurity. Journal of the American Academy of Child and Adolescent Psychiatry, 35, 175–183.
 Schweitzer, J. B., Faber, T. L., Gratfon, S. T., Tine, L. E., Hoffman, J. M., Kilts, C. D. (2000). Alterations in the functional anatomy of working memory in adult attention deflicit hyperactivity disorder. American Journal of Psychiatry, 157, 278–280.
 Seidman, L. J., Benedict, K. B., Biederman, J., Bernstein, J. H., Seiverd, K., Milberger, S., et al. (1995). Performance of children with ADHD on the Rey-Osterrieth Complex Figure: A ribt neuropsychological study. Journal of Child Psychology.
- aren with ADHD on the Rey-Vsterrieth Complex Figure: A pilot neuropsychological study. Journal of Child Psychology and Psychiatry, 36, 1459-1473.Seidman, L. J., Biederman, J., Faraone, S. V., Milberger, S., Norman, D., Seiverd, K., et al. (1995). Effects of family his-tory and comorbidity on the neuropsychological performance of children with ADHD: Preliminary findings. Journal of the American Academy of Child and Adolescent Psychiatry, 34, 1015-1049.
- 1013-1024.
 Boidman, L. J., Biederman, J., Faraone, S. V., Weber, W., & Ouellette, C. (1997). Toward defining a neuropsychology of attention deficit-hyperactivity disorder: Performance of children and adolescence from a large clinically referred sample. Journal of Consuling and Clinical Psychology, 65, 150-160.
 Seguin, J. R., Boulerice, B., Harden, P. W., Tremblay, R. E., & Pill.
 B. A. (1900). Executive functions and hybridal varieties of the
- init, 3. A. Boulette, B. Hatter, 1. W., Heilboay, N. E., & Friedrich, R. O. (1999). Executive functions and physical aggression after controlling for attention deficit hyperactivity disorder, general memory, and 1Q. Journal of Child Psychology and Psychiatry, 40, 1197–1208.
- Semrud-Cikeman, M., Biederman, J., Sprich-Buckminster, S., Lehman, B. K., Faraone, S. V., & Norman, D. (1992). Comorbidity between ADDH and learning disability: A review and report in a clinically referred sample. *Journal of* the American Academy of Child and Adolescent Psychiatry 31, 439-448.
- Semrud-Clikeman, M., Filipek, P. A., Biederman, J., Steingard, R., Kennedy, D., Renshaw, P., et al. (1994). Attention-deficit hyperactivity disorder: Magnetic resonance imaging

- morphometric analysis of the corpus callosum. Journal of the American Academy of Child and Adolescent Psychiatry, 33, 875-881
- Semrud-Clikeman, M., Steingard, R. J., Filipek, P., Biederman, J., Bekken, K., & Renshaw, P. F. (2000). Using MRI to examine brain-behavior relationships in males with attention deficit disorder with hyperactivity. Journal of the American Academy of Child and Adolescent Psychiatry, 39, 477-484.
- Sergeant, J. (1988). From DSM-III attentional deficit disorder to functional defects. In L. Bloomingdale & J. Sergeant (Eds.), Attention deficit disorder: Criteria, cognition, and intervention (pp. 183-198). New York: Pergamon.
- [Pp. 185–196). New York: Pergamon.
 Sergeant, J., & van der Meere, J. P. (1994). Toward an empirical child psychopathology. In D. K. Routh (Ed.), Disruptive behavior disorders in children (pp. 59–86). New York: Plenum.
 Shaywitz, S. E., Cohen, D. J., & Shaywitz, B. E. (1980). Behavior
- and learning difficulties in children of normal intelligence born to alcoholic mothers. *Journal of Pediatrics*, 96, 978–982. Shaywitz, S. E., Shaywitz, B. A., Cohen, D. J., & Young, J. G. (1983). Monoaminergic mechanisms in hyperactivity. In M.
- Rutter (Ed.), Developmental neuropsychiatry (pp. 330-347). New York: Guilford.
- Shaywitz, S. E., Shaywitz, B. A., Jatlow, P. R., Sebrechts, M., Anderson, G. M., & Cohen, D. J. (1986). Biological differ-entiation of attention deficit disorder with and without hy-peractivity. A preliminary report. Annals of Neurology, 21,
- 363.
 Shelton, T. L., Barkley, R. A., Crosswait, C., Moorehouse, M., Fletcher, K., Barrett, S., et al. (1998). Psychiatric and psychological morbidity as a function of adaptive disability in preschool children with high levels of aggressive and hyperactive-impulsive-inattentive behavior. Journal of Abnorimal Child Psychology, 26, 475-494.
 Sherman, D. K., Jacono, W. G., & McGue M. K. (1997). Attention-deficit hyperactivity disorder dimensions: A twin study of inattention and impulsivity-hyperactivity. Journal of the American.
- tention and impulsivity-hyperactivity. *Journal of the American Academy of Child and Adolescent Psychiatry*, 36, 745–753. Sherman, D. K., McGue, M. K., & Iacono, W. G. (1997). Twin concordance for attention deficit hyperactivity disorder: A com-
- parison of teachers' and mothers' reports. American Journal of Psychiatry, 154, 532-535.

 Silberg, J., Rutter, M., Meyer, J., Maes, H., Hewitt, J., Simonoff, E., et al. (1996). Genetic and environmental influences on the
- covariation between hyperactivity and conduct disturbance in juvenile twins. Journal of Child Psychology and Psychiatry, 37, 803-816
- Silva, P. A., Hughes, P., Williams, S., & Faed, J. M. (1988). Blood lead, intelligence, reading attainment, and behaviour in eleven year old children in Dunedin, New Zealand. Journal of Child
- Psychology and Psychiatry, 29, 43–52.
 Singer, H. S., Reiss, A. L., Brown, J. E., Aylward, E. H., Shih, B.,
 Chee, E., et al. (1993). Volumetric MRI changes in basal
 ganglia of children with Tourette's syndrome. Neurology, 43, ganglia o 950-956.
- Susarek, M., Velling, S., Bunk, D., & Eggers, C. (2001). Motivational effects on inhibitory control in children with ADHD. Journal of the American Academy of Child and Adolescent Psychiatry, 40, 355-363.
 Smalley, S. L., McGough, J. J., Del'Homme, M., NewDelman, J., Gordon, E., Kim, T., et al. (2000). Familial clustering of symptoms and disruptive behaviors in multiplex families
- with attention-deficit/hyperactivity disorder. Journal of the American Academy of Child and Adolescent Psychiatry, 39, 1135-1143
- Sonuga-Barke, E. J., Lamparelli, M., Stevenson, J., Thompson, M., & Henry, A. (1994). Behaviour problems and pre-school intellectual attainment: The associations of hyperactivity and conduct problems. Journal of Child Psychology and Psychia-try, 35, 949-960.

- Sonuga-Barke, E. J. S., Taylor, E., & Hepinstall, E. (1992). Hyperactivity and delay aversion: II. The effect of self versus externally sed stimulus presentation periods on memory. Journal of
- Child Psychology and Psychiatry, 33, 399-409.
 Solanto, M. V., Abikoff, H., Sonuga-Barke, E., Schachar, R., Logan, G. D., Wigal, T., et al. (2001). The ecological validity of delay aversion and response inhibition as measures of impulsivity in AD/HD: A supplement to the NIMH Multimodal Treatment Suppressent to the NIMH Multimodal Treatment Study of ADHD. Journal of Abnormal Child Psychology, 29, 215-228.
- Southam-Gerow, M. A., & Kendall, P. C. (2002). Emotion regula-tion and understanding: Impliations for child psychopathology
- and therapy. Clinical Psychology Review, 22, 189-222.

 Spencer, T. J., Biederman, J., Faraone, S., Mick, E., Coffey, B.,

 Geller, D., et al. (2001). Impact of tie disorders on ADHD

 outcome across the life cycle: Findings from a large group of adults with and without ADHD. American Journal of Psychiatry, 158, 611-617.
- Spencer, T. J., Biederman, J., Harding, M., O'Donnell, D., Faraone, S. V., & Wilens, T. E. (1996). Growth deficits in ADHD children revisited: Evidence for disorder-associated growth delays? Journal of the American Academy of Child and Adolescent
- Journal of the American Academy of Chia and Adolescent Psychiatry, 35, 1460–1469.
 Spencer, T., Wilens, T., Biederman, J., Wozniak, J., & Harding-Crawford, M. (2000). Attention-deficit/hyperactivity disorder with mood disorders. In T. E. Brown (Ed.), Attention deficit disorders and comorbidities in children, adolescents, and adults
- disorders and comorbatues in cultaren, acouszents, and autas (pp. 79–124). Washington, D.C. American PsychiatricPress Sprich, S., Biederman, I., Crawford, M. H., Mundy, E., & Faraone, S. V. (2009). Adoptive and biological families of children and adolescents with ADHD. Journal of the American Academy of
- adolescents with ADHD. Journal of the American Academy of Child and Adolesen Psychiatry, 39, 1432–1437.

 Stein, M. A. (1999). Unravelling sleep problems in treated and untreated children with ADHD. Journal of Child and Adolescent Psychopharmacology, 9, 157–168.

 Stein, M. A., Szumowski, E., Blondis, T. A., & Roizen, N. J. (1995). Adaptive skills dysfunction in ADD and ADHD children.
- Journal of Child Psychology and Psychiatry, 36, 663-670. Stein, M. A., Weiss, R. E., & Refetoff, S. (1995). Neurocognitive characteristics of individuals with resistance to thyroid hor-mone: Comparisons with individuals with attention-deficit hyperactivity disorder. Journal of Developmental and Behavioral Pediatrics, 16, 406-411.
- reaustrics, 16, 406-411.

 Stevenson, I., Pennington, B. F., Gilger, I. W., DeFries, J. C., & Gilfes, J. I. (1993). Hyperactivity and spelling disability: Testing for shared genetic aetiology. Journal of Child Psychology and Psychiatry, 34, 1137-1152.

 Stewart, M. A. (1970). Hyperactive children. Scientific American, 222, 94-98.
- 222, 94-98.
 Stewart, M. A., Pitts, F. N., Craig, A. G., & Dieruf, W. (1966). The hyperactive child syndrome. American Journal of Orthopsychiatry, 36, 861-867.
 Stewart, M. A., Thach, B. T., & Friedin, M. R. (1970). Accidental

- Stewart, M. A., Haderl, B. 1., & Treediff, M. K. (1970). Academia poisoning and the hyperactive child syndrome. Disease of the Nervous System, 31, 403-407.
 Still, G. F. (1902). Some abnormal psychical conditions in children. Lancet, 1, 1008–1012, 1077–1082, 1163–1168.
 Strauss, A. A., & Kephardt, N. C. (1955). Psychopathology and education of the brain-injured child: Vol. 2. Progress in theory and the still syndrome. The conditions of the prain-injured child: Vol. 2. Progress in theory and the still syndrome. and clinic. New York: Grune & Stratton.
- Strauss, A. A., & Lehtinen, L. E. (1947). Psychopathology and education of the brain-injured child. New York: Grune & Stratton.
 Strauss, M. E., Thompson, P., Adams, N. L., Redline, S., & Burant, C.
- (2000). Evaluation of a model of attention with confirmatory factor analysis. *Neuropsychology*, 14, 201-208.
- Streissguth, A. P., Bookstein, F. L., Sampson, P. D., & Barr, H. M. (1995). Attention: Prenatal alcohol and continuities of vigilance and attentional problems from 4 through 14 years. Development and Psychopathology, 7, 419-446.

- Streissguth, A. P., Martin, D. C., Barr, H. M., Sandman, B. M., Kirchner, G. L., & Darby, B. L. (1984). Intrauterine alcohol and nicotine exposure: Attention and reaction time in 4-year-
- and necotine exposure: Attention and reaction time in 4-year-old children. Developmental Psychology, 20, 533-541.

 Stryker, S. (1925). Encephalitis lethargica—The behavior residuals. Training School Bulletin, 22, 152-157.

 Swaab-Barneveld, H., DeSonneville, L., Cohen-Kettenis, P., Gielen, A., Buitelaar, J., & van Engeland, H. (2000). Visual sustained attention in a child psychiatric population. Journal of the American Academy of Child and Adolescent Psychiatry, 30, 651-659.
- Sykes, D. H., Hoy, E. A., Bill, J. M., McClure, B. G., Halliday, H. L., & Reid, M. M. (1997). Behavioural adjustment in school of very low birthweight children. Journal of Child Psychology
- very low outraweight children. Journal of Child Psychology and Psychiatry, 38, 315-325.
 Szatmari, P. (1992). The epidemiology of attention-deficit hyperac-tivity disorders. In G. Weiss (Ed.), Child and adolescent psy-
- chiarric clinics of North America: Attention-deficit hyperactivity disorder (pp. 361–372). Philadelphia: Saunders. Szatmari, P., Offord, D. R., & Boyle, M. H. (1989). Correlates, associated impairments, and patterns of service utilization of children with attention deficit disorders: Findings from the Ontario Child Health Study. Journal of Child Psychology and Psychiatry, 30, 205-217
- atry, 30, 205-217.
 Szatmari, P., Saigal, S., Rosenbaum, P., & Campbell, D. (1993).
 Psychopathology and adaptive functioning among extremely low birthweight children at eight years of age. Development and Psychopathology, 5, 345-357.
 Tallmadge, J., & Barkley, R. A. (1983). The interactions of hyperactive and normal boys with their mothers and fathers. Journal of Ahnormal Child Psychology, 11, 565-579.
 Tannock, R. (1998). Attention deficit hyperactivity disorder:

- Tannock, R. (1998). Attention dehot hyperactivity disorder: Advances in cognitive, neurobiological, and genetic research. Journal of Child Psychology and Psychiatry, 39, 65-100.
 Tannock, R. (2009). Attention-deficit/hyperactivity disorder with anxiety disorders. In T. E. Brown (Ed.), Attention deficit disorders and comorbidities in children, adolescents, and adults (pp. 125-170). Washington, DC: American Psychiatric Press
- Tannock, R., & Brown, T. E. (2000). Attention-deficit disorders with learning disorders in children and adolescents. In T. E. Brown (Ed.), Attention deficit disorders and comorbidities in children, adolescents, and adults (pp. 231-296). Washington, DC: American Psychiatric Press
- Tannock, R., Martinussen, R., & Frijters, J. (2000). Naming speed performance and stimulant effects indicate effortful, semantic
- performance and summant effects indicate effortual, semantic processing deficits in attention-deficithyperactivity disorder. Journal of Abnormal Child Psychology, 28, 237–252. Tarver-Behring, S., Barkley, R. A., & Karlsson, I. (1985). The mother-child interactions of hyperactive boys and their normal siblings. American Journal of Orthopsychiatry, 55, 202–200. 202-209
- Taylor, E. (1999). Developmental neuropsychology of attention deficit and impulsiveness. Development and Psychopathology, 11, 607–628.
- Taylor, E., Sandberg, S., Thorley, G., & Giles, S. (1991). The epidemiology of childhood hyperactivity. Oxford, UK: Oxford University Press.
 Teicher, M. H., Anderson, C. M., Polcari, A., Glod, C. A., Maas, L. C., & Renshaw, P. F. (2000). Functional deficits in basal ganglia of children with attention-deficit/hyperactivity disormance. der shown with functional magnetic resonance imaging relax-ometry. Nature Medicine, 6, 470-473.
- Thapar, A. J. (1999). Genetic basis of attention deficit and hyperactivity. Briisht Journal of Psychiatry, 174, 105–111.
 Thapar, A., Hervas, A., & McGuffin, P. (1995). Childhood hyper-
- activity scores are highly heritable and show sibling competi-tion effects: Twin study evidence. Behavior Genetics, 25, 537-

- Torgesen, J. K. (1994). Issues in the assessment of executive function: An information-processing perspective. In G. R. Lyon (Ed.), Frames of reference for the assessment of learning disabilities: New views on measurement issues (pp. 143-162). Baltimore: Brookes
- Tripp, G., & Alsop, B. (1999). Sensitivity to reward frequency in
- Tripp, G., & Alsop, B. (1999). Sensitivity to reward frequency in boys with attention deficit hyperactivity disorder. Journal of Clinical Child Psychology, 28, 366–375.
 Tripp, G., & Alsop, B. (2001). Sensitivity to reward delay in children with attention deficit hyperactivity disorder (ADHD). Journal of Child Psychology and Psychiatry, 42, 691–698.
 Trites, R. L. (1979). Hyperactivity in children: Etiology, measurement, and treatment implications. Baltimore: University Park Press.
- Press
- R. L., Dugas, F., Lynch, G., & Ferguson, B. (1979). Incidence
- of hyperactivity. Journal of Pediatric Psychology, 4, 179-188.

 Trommer, B. L., Hoeppner, J. B., Rosenberg, R. S., Armstrong, K. J., & Rothstein, J. A. (1988). Sleep disturbances in children with attention deficit disorder. Annals of Neurology, 24, 325
- Ullman, D. G., Barkley, R. A., & Brown, H. W. (1978). The behavioral symptoms of hyperkinetic children who successfully responded to stimulant drug treatment. American Journal of Orthopsychiatry, 48, 425-437.
- Vaidya, C. J., Austin, G., Kirkorian, G., Ridlehuber, H. W., Desmond, J. E., Glover, G. H., et al. (1998). Selective effects of methylphenidate in attention deficit hyperactivity disorder:
- A functional magnetic resonance study. Proceedings of the national Academy of Science, 95, 14494–14499. van den Oord, E. J. C. G., Boomsma, D. I., & Verhulst, F. C. (1994). A study of problem behaviors in 10- to 15-year-old biologically related and unrelated international adoptees. Behavior Genetics, 24, 193–205. van den Oord, E. J. C., & Rowe, D. C. (1997). Continuity and change
- van ten Odd, E. J.C., & Rówe, D. (1971). Community and change in children's social maladjustment: A developmental behavior genetic study. Developmental Psychology, 33, 319–332. Velez, C. N., Johnson, J., & Cohen, P. (1989). A longitudinal analysis of selected risk factors for childhood psychopathology. Journal of the American Academy of Child and Adolescent Psychiatry, 28, 861–864.
- Velting, O. N., & Whitehurst, G. J. (1997). Inattention-hyperactivity
- Velting, O. N., & Whitehurst, G. J. (1997). Inattention-hyperactivity and reading achievement in children from low-income families: A longitudinal model. Journal of Abnormal Child Psychology, 25, 321–331.
 Voelker, S. L., Carter, R. A., Sprague, D. J., Gdowski, C. L., & Lachar, D. (1989). Developmental trends in memory and metamemory in children with attention deficit disorder. Journal of Pediatric Psychology, 14, 75–88.
 Volkow, N. D., Wang, G. J., Fowler, J. S., Logan, J., Gerasimov, M., Maynard, L., et al. (2001). Therapeutic doses of oral methylphenidate significantly increase extracelluar dopamine in the human brain. The journal of Pediatroscience, 21, 1–5.
 Wakefield, J. C. (1999). Evolutionary versus prototype analyses of the concept of disorder. Journal of Abnormal Psychology, 108.
- the concept of disorder. Journal of Abnormal Psychology, 108, 374–399.
- Wallander, J. L., Schroeder, S. R., Michelli, J. A., & Gualtieri, C. T. (1987). Classroom social interactions of attention deficit Ci (130), Leassouli social interactions in attention discrete disorder with hyperactivity children as a function of stimulant medication. Journal of Pediatric Psychology, 12, 61–76.
 Weiss, G., & Hechtman, L. (1993). Hyperactive children grown up (2nd ed.). New York: Guilford.
- Weiss, G., & Hechtman, L. (in press). Hyperactive children grown up (3rd ed.). New York: Guilford.
- Weiss, R. E., Stein, M. A., Trommer, B., & Refetoff, S. (1993). Attention-deficit hyperactivity disorder and thyroid function. Journal of Pediatrics, 123, 539-545. Welner, Z., Welner, A., Stewart, M., Palkes, H., & Wish, E. (1977).
- A controlled study of siblings of hyperactive children. Journal of Nervous and Mental Disease, 165, 110-117.

- Welsh, M. C., & Pennington, B. F. (1988). Assessing frontal lobe
- Weish, M. C., & Pennington, B. F. (1988). Assessing frontal lobe functioning in children. Views from developmental psychol-ogy. Developmental Neuropsychology, 4, 199–230.
 Werner, E. E., Bierman, J. M., French, F. W., Simonian, K., Connor, A., Smith, R. S., et al. (1971). Reproductive and envi-ronmental casualties: A report on the 10-year follow-up of the children of the Kanaj recognostic study. Padiatrics, 42, 112, 137. children of the Kauai pregnancy study. *Pediatrics*, 42, 112-127. Werry, J. S., Elkind, G. S., & Reeves, J. S. (1987). Attention deficit,
- conduct, oppositional, and anxiety disorders in children: III. Laboratory differences. *Journal of Abnormal Child Psychology*, 15, 409-428.
- Werry, J. S., & Quay, H. C. (1971). The prevalence of behavior
- weisy, 1. S., & Quay, H. C. (1971). The prevalence of benavior symptoms in younger elementary school children. American Journal of Orthopsychiatry, 41, 136-143.

 Whalen, C. K., & Henker, B. (1992). The social profile of attention-deficit hyperactivity disorder: Five fundamental facets. In G. Weiss (Ed.), Child and adolescent psychiatric clinics of North America: Attention-deficit hyperactivity disorder (pp. 395-410).

 Philadelships Sound-Sundamental Profile State (pp. 395-410).
- America. Alexanor-aejaca ryperacurvay assoraer (pp. 595-41). Philadelphia: Saunders.
 Whalen, C. K., Henker, B., Collins, B. E., McAuliffe, S. Vaux, A. (1979). Peer interaction in structured communication task: Comparisons of normal and hyperactive boys and of methylphenidate (Ritalin) and placebo effects. Child Development, 50, 388-401.
- offment, 30, 388–401. Iden, C. K., Henker, B., & Dotemoto, S. (1980). Methylphenidate and hyperactivity: Effects on teacher behaviors. *Science*, 208, 1280–1282.
- Whalen, C. K., Henker, B., Swanson, J. M., Granger, D., Kliewer, W., & Spencer, I. (1987). Natural social behaviors in hyperw., & spencer, 1, (1987). Natural social behaviors in hypora-active children: Dose effects of methylphenidate. *Journal of Consulting and Clinical Psychology*, 55, 187–193. White, H. R., Xie, M., Thompson, W., Loeber, R., & Stouthamer-Loeber, M. (in press). Psychopathology as a predictor of
- adolescent drug use trajectories. Psychology of Addictive
- Behavior.

 Whitaker, A. H., Van Rossem, R., Feldman, J. F., Schonfeld, I. S.,
 Pinto-Martin, J. A., Torre, C., et al. (1997). Psychiatric outcomes in low-birth-weight children at age 6 years: Relation
 to neonatal cranial ultrasound abnormalities. Archives of
 General Psychiatry, 54, 847–856.

 Wiers, R. W., Gunning, W. B., & Sergeant, I. A. (1998). Is a mild
 deficit in executive functions in boys related to childhood
 ADHD or to parental multigenerational alcoholism. Journal
 of Abnormal Child Psychology, 26, 415–430.

 Wiens, T. E., Biederman, J., & Spencer, T. (1994). Clonidine for
 sleep disturbances associated with attention-deficit hyperactivit disorder. Journal of the American Academy of Child and
- steep disturbed associated with attention-ceited hyperac-tivity disorder. Journal of the American Academy of Child and Adolescent Psychiatry, 33, 424–426. Willcutt, E. G., Pennington, B. F., Boada, R., Ogline, J. S., Tunick, R. A., Chhabildas, N. A., et al. (2001). A comparison
- of the cognitive deficits in reading disability and attention-deficit/hyperactivity disorder. Journal of Abnormal Psychology, 110, 157-172.
- Willcutt, E. G., Pennington, B. F., Chhabildas, N. A., Friedman, M. C., & Alexander, J. (1999). Psychiatric comorbidity associated with DSM-IV ADHD in a nonreferred sample of twins. Journal of the American Academy of Child and Adolescent Psychiatry, 38, 1355-1362.
- Willerman, L. (1973). Activity level and hyperactivity in twins Child Development, 44, 288-293.

- Willis, T. J., & Lovaas, I. (1977). A behavioral approach to treating hyperactive children: The parent's role. In J. B. Millichap (Ed.), Learning disabilities and related disorders (pp. 119–140). Chicago: Yearbook Medical Publications.
- Winsler, A. (1998). Parent-child interaction and private speech in boys with ADHD. Applied Developmental Science, 2, 17-39.
- Winsler, A., Diaz, R. M., Atencio, D. J., McCarthy, E. M., & Chabay, Winsler, A., Diaz, K. M., Atencio, D. J., McCartny, E. M., & Chausy, L. A. (2000). Verbal self-regulation over time in preschool children at risk for attention and behavior problems. *Journal of Child Psychology and Psychiatry*, 41, 875–886.
 Wolraich, M. L., Hannah, J. N., Baumgaertel, A., & Feurer, I. D. (1998). Examination of DSM-IV criteria for attention.
- deficit/hyperactivity disorder in a county-wide sample. Journal of Developmental and Behavioral Pediatrics, 19, 162-168. Wolraich, M. L., Hannah, J. N., Pinnock, T. Y., Baumgaertel,
- A., & Brown, J. (1996). Comparison of diagnostic criteria for attention-deficit hyperactivity disorder in a countrywide sample. Journal of the American Academy of Child and Adolescent Psychiatry, 35, 319-324.
- Wood, F. B., & Felton, R. H. (1994). Separate linguistic and attentional factors in the development of reading. Topics in language disorders 14 52-57
- Woodward, L. J., Fergusson, D. M., & Horwood, L. J. (2000). Driving outcomes of young people with attentional difficulties in adolescence. Journal of the American Academy of Child and
- Adolescent Psychiatry, 39, 627-634.
 World Health Organization. (1993). The ICD-10 classification of mental and behavioral disorders: Diagnostic criteria for research. Geneva, Switzerland: Author.
 Wozniak, J., Biederman, J., Kiely, K., Ablon, S., Faraone, S. V.
- Mundy, E., et al. (1995). Mania-like Sony, p., Faraone, S. V., Mundy, E., et al. (1995). Mania-like symptoms suggestive of childhood-onset bipolar disorder in clinically referred chil-dren. Journal of the American Academy of Child and Ado-lescent Psychiatry, 34, 867–876.
- Zagar, R., & Bowers, N. D. (1983). The effect of time of day on problem-solving and classroom behavior. Psychology in the Schools, 20, 337-345.
 Zametkin, A. J., Liebenauer, L. L., Fitzgerald, G. A., King, A. C., Minkunas, D. V., Herscovitch, P., et al. (1993). Brain metabolism in teenagers with attention-deficit hyperactivity
- disorder. Archives of General Psychiatry, 50, 333–340.

 Zametkin, A. J., Nordahl, T. E., Gross, M., King, A. C., Semple, W. E., Rumsey, I., et al. (1990). Cerebral glucose metabolism in adults with hyperactivity of childhood onset. New England Journal of Medicine, 323, 1361–1366.
- Journal of Medicine, 323, 1361–1366.
 Zametkin, A. I., & Rapoport, J. L. (1986). The pathophysiology of attention deficit disorder with hyperactivity: A review. In B. B. Lahey & A. E. Kazdin (Eds.), Advances in clinical child psychology (Vol. 9, pp. 177–7216). New York: Plenum. Zentall, S. S. (1985). A context for hyperactivity. In K. Gadow & L. Biale (Eds.), Advances in terminal debatical distributions.
- I. Bialer (Eds.), Advances in learning and behavioral disabilities (Vol. 4, pp. 273–343). Greenwich, CT: JAI Press.

 Zentall, S. S. (1988). Production deficiencies in elicited language but
- Zentaii, S. S. (1988). Froduction denechences in elicited language but not in the spontaneous verbalizations of hyperactive children. Journal of Abnormal Child Psychology, 16, 657–673.
 Zentali, S. S., & Smith, Y. S. (1993). Mathematical performance and behavior of children with hyperactivity with and with-out coexisting aggression. Behavior Research and Therapy, 31, 227, 720.

APPENDIX H – WRITTEN STATEMENT BY DR. KAREN EFFREM SUBMITTED FOR THE RECORD BY REPRESENTATIVE MARILYN MUSGRAVE, SUBCOMMITTEE ON EDUCATION REFORM, COMMITTEE ON EDUCATION AND THE WORKFORCE, U.S. HOUSE OF REPRESENATIVES, WASHINGTON, D.C.

Hearing on "Protecting Children: The Use of Medication in Our Nation's Schools and H.R. 1170, Child Medication Safety Act of 2003"

Response by Karen R. Effrem, MD
International Center for the Study of Psychiatry and Psychology
Maple River Education Coalition
National Physicians' Center for Family Resources

May 12, 2003

INTRODUCTION AND SUMMARY:

Many thanks to Chairman Castle for holding this hearing, to Mr. Burns for introducing this vital piece of legislation, and to the Subcommittee for this opportunity to respond to these very important proceedings.

I am a mother of three wonderful children, a board certified pediatrician, and a taxpayer who has been involved in children's health and education public policy issues for many years. I strongly agree with the testimony of Dr. Carey and Representative Bryson and I could not more strongly disagree with the testimony of Dr. Clawson. Some of the very documents and researchers cited by Dr. Clawson will uphold that position.

I will make and support the following points in response to the testimony presented at the hearing:

- 1) Attention Deficit /Hyperactivity Disorder (ADD/ADHD) is over diagnosed.
- 2) Stimulant medications, as well as other psychotropic medications are over prescribed.
- Parents are being coerced to force their children to take stimulant medications and other psychotropic medication.
- 4) The diagnostic criteria for ADD/ADHD and for all of the other mental illnesses are vague political and social constructs as admitted by those that define the criteria and there is not near as much agreement about those criteria as purported by Dr. Clawson.
- 5) These medications are not at all effective in the long term.
- 6) The psychotropic medications, both on and off the controlled substances list, are far from benign; their side effects are rarely adequately explained to parents; and there are no studies defining their effects on the developing nervous systems of growing children, especially those under the age of five years.
- 7) No psychiatric illness is caused by naturally occurring deficiencies of any psychiatric drug, but there are many reasons that children may have symptoms of mental illness that are overlooked by both schools and physicians that can be corrected without psychiatric drugs.
- 8) Although this bill is a tremendous and incredibly important means to protect our children, it is only a first step. Left as is, this legislation may have the tragic unintended consequence of creating an incentive for schools to coerce parents to put their children on the other approximately 36 psychotropic medications that are not on the controlled substances list.

STATEMENT:

1) Attention Deficit /Hyperactivity Disorder (ADD/ADHD) is over diagnosed.

- O Vera Hassner Sharav, MLS, President of The Alliance for Human Research Protection, said in a comprehensive review of children in drug research studies published in April of 2003 in the American Journal of Bioethics', "For example, Drs. Benedetto Vitiello, Peter Jensen, and Laurence Greenhill, whose work is supported by pharmaceutical companies and the NIMH, claim that the rate of ADHD in the U.S. is 3% to 5%. They also claim that even if drugs are over prescribed, ADHD is under diagnosed. Greenhill claims, 'The percentage of U.S. youth being treated with psychostimulants is well within the estimates of the prevalence of ADHD.' Jensen asserts that 'only about one-half the children with ADHD are getting treated.' They deny that there is any problem with over prescribing stimulant or psychoactive drugs for children. But a University of Massachusetts study found that less than one percent of elementary school children in the United Kingdom are diagnosed with ADHD. The study author concluded from that comparative statistic that ADHD may be culturally specific rather than biologically produced."
- According to a report by President Bush's Commission on Special Education entitled A NEW ERA: Revitalizing Special Education for Children and their Families, 90% of students served under IDEA have "high incidence" disabilities such as mental, emotional, specific learning disabilities or "other health impairments."²
- The "other health impairment" category has "increased 319% in the last ten years" (since mental and emotional disorders were added to IDEA in 1991). "Some of the growth in the other health impairment (OHI) category is the result of the growth in children identified as having ADHD, where a physician's signature is generally sufficient to trigger the eligibility process." 3
- O Using just the state of Minnesota as an example, the rate of designation for other health impairment, which includes ADHD, has gone up 830% since 1991 when the US Department of Education stated that ADD/ADHD could be part of the disorders covered under IDEA (MN Dept of Children Families and Learning). It is a case of getting what one subsidizes.

2) Stimulant medications, as well as other psychotropic medications are over prescribed.

- Prescription of psychotropic drugs, particularly Ritalin, for 2 to 4 year old children, increased 300% between 1991 and 1995.⁵ Ritalin (methylphenidate), along with amphetamine and methampehtamine are in the stimulant class of psychiatric medications. Ritalin is the drug most commonly used to treat ADHD.
- o A study published in January 2003 in the Archives of Pediatric and Adolescent Medicine by the same author found a 300% increase in psychotropic drug use in children between 1987 and 1996, that 6% of ALL children in the study were on psychiatric medications, and a sharp rise in use of antipsychotic in poor children. The latter finding led the author to theorize that medications were being used as a social control tool in low-income populations.⁶
- O Data on "'drug mentions' that occur during a hospital or office visit when a doctor provides or prescribes a medication, or orders it refilled" was analyzed by the National Center for Health Statistics for a Sacramento Bee story published on June 23, 2002. According to that data, stimulants such as Ritalin were mentioned 5.3 million times in the year 2000, which was nearly twice as often as they were mentioned in 1995-1996. Antidepressant mentions doubled in that same period after already increasing four fold from 1990 to 1995.

o "Although SSRI's had until recently been approved for use only by adults over the age of 18, they have and are being widely and often inappropriately prescribed for children, without medical justification or evidence of safety. What's more, they are being prescribed to younger and younger children, singly and in combination with stimulants and antipsychotics...FDA statistics compiled by an industry research firm indicate that Prozac 'was prescribed 349,000 times to pediatric patients under 16-including 3,000 times to infants under 1 year of age."

Parents are being coerced to force their children to take stimulant medications and other psychotropic medication.

ICSPP IDEA task force member, Doretta Hegg, M.A., founder of C.H.I.L.D., sees repetitive intimidation and suggestive coercion employed by schools that panic parents into putting their child on a psychotropic medication. Here are a few examples from around the country of parents who have been willing to speak out:

- o In New York, Patricia Weathers⁹ and the Carroll¹⁰ families were threatened or charged with child abuse for wanting to take their sons off of stimulant medications following adverse reactions. The Carroll family was ordered by a judge to continue the medication despite the drug's severe adverse effects on Kyle's sleep and appetite. According to New York Post reporter Douglas Montero, "Assemblyman Felix Ortiz, the Brooklyn Democrat trying to create a law banning educators from verbally prescribing Ritalin, said that since last week, his office has received 63 phone complaints from parents." ¹¹
- Neil Bush, brother of President George W. Bush, stated that he endured pressure from a private school in Houston to medicate his son Pierce with Ritalin for ADHD incorrectly diagnosed by the school. "There is a systemic problem in this country, where schools are often forcing parents to turn to Ritalin," said Bush, 47, who spent years researching the issue. "It's obvious to me that we have a crisis in this country." Neil Bush also said, "The problem is, it isn't the kids that are broken. It's the system that is failing to engage children in the classroom," and "My heart goes out to any parents who are being led to believe their kids have a disorder or are disabled." "It's the system that is failing to engage children in the classroom," and "My heart goes out to any parents who are being led to believe their kids have a disorder or are disabled.
- o Paul Johnston of West Virginia began kindergarten as an exuberant and very normal five year old until the teacher began pressuring his parents to have him evaluated for ADHD. The parents were coerced into starting him on Ritalin, and he was eventually "treated" with a total of sixteen different psychotropic medications and experienced seven hellish years of drug-induced psychosis. He was finally released from an institution after a court battle and was carefully withdrawn from the medication by Dr. Breggin.¹³
- Daniel Salazar's parents, Raul and Yolanda, were threatened with removal of Daniel from their home in Florida if they did not give Daniel psychiatric drugs.¹⁴
- o Matthew Smith of Michigan died of cardiac effects of stimulant medication after his parents were coerced into starting him on Ritalin. His father stated, "She [the school social worker] told my wife and I that if we wouldn't consider drugging our son, after the school had diagnosed him with Attention Deficit Hyperactivity Disorder (ADHD), that we could be charged for neglecting his educational and emotional needs." 15
- Vicky Dunkle of Pennsylvania lost her 14-year-old daughter Shaina to cardiac toxicity from the drug desipramine after the school coerced her into starting that medication for supposed attention problems.¹⁶

- 4) The diagnostic criteria for ADD/ADHD and for all of the other mental illnesses are vague political and social constructs as admitted by those that define the criteria and there is not near as much agreement about those criteria as purported by Dr. Clawson.
 - The 1999 Surgeon General's Report on Mental Health that Dr. Clawson so frequently quotes says, "The diagnosis of mental disorders is often believed to be more difficult than diagnosis of somatic or general medical disorders since there is no definitive lesion, laboratory test or abnormality in brain tissue that can identify the illness"
 - All of the following quotes are from <u>Attention Deficit Hyperactivity Disorder State of the Science Best Practices</u>, Peter S. Jensen and James R. Cooper, Eds, Civic Research Institute, Kingston, N.J. 2002
 - "Diagnostic categories of mental disorders are social constructions (Bandura, 1969). It is essential, therefore, that the mental health field continually question whether diagnostic categories are defined in ways that serve the best interests of the diagnosed. That is, each of the many aspects of the validity of each diagnosis, including ADHD, must be thoughtfully and persistently questioned." (p. 1-8,9)
 - "At present, there is growing evidence that two valid dimensions of impairing ADHD behaviors can be identified, but there is no evidence of a natural threshold between ADHD and 'normal' behavior. . Thus, there is little evidence at this time to suggest that there is a natural boundary for the diagnostic category of ADHD." (p. 1-14)
 - The assumption that the ADHD symptoms arise from cerebral malfunction has not been supported even after extensive investigations. The current diagnostic system ignores the probably contributory role of the environment; the problem is supposedly all in the child. The questionnaires most commonly used to diagnose ADHD are highly subjective and impressionistic." (p. 3-2)
 - "No consistent structural, functional, or chemical neurological marker is found in children with the ADHD diagnosis as currently formulated." (p. 3-7)
 - "DSM-IV criteria remain a consensus without clear empirical data supporting the number of items required for the diagnosis... Furthermore, the behavioral characteristics specified in DSM-IV, despite efforts to standardize them, remain subjective..."¹⁷
 - "Problems of diagnosis include differentiating this entity from other behavioral problems and determining the appropriate boundary between the normal population and those with ADHD"18
 - The 2001 World Health Report by the World Health Organization states, "Childhood and adolescence being developmental phases, it is difficult to draw clear boundaries between phenomena that are part of normal development and others that are abnormal."
 - The New Era report says that children with these "high incidence" 'disorders' "cannot be identified on the basis of acuity, physical or neurological findings."
 - On August 6, 2002, The Netherlands Advertisement Code Commission (Reclame Code Commissie) ruled that the country's Brain Foundation cannot claim that the controversial psychiatric condition Attention Deficit Hyperactivity Disorder (ADHD) is a neurobiological disease or brain dysfunction. The Commission ordered the Foundation to cease such false claims in their advertising. The Commission stated, "The information that the defendant presented gives no grounds for the definitive statement that ADHD is an inherent brain dysfunction. Under the circumstances, the defendant has not been careful enough and the advertisement is misleading."

o "The language used to present these criteria and procedures exudes the spirit of technical rationality. The diagnosis comes with its unique code number; references to other complex concepts, e.g., mental age; specifications about precise duration (six months) and the number of symptoms needed; vague references to unspecified research about 'discriminating power' and national field trials; and defined levels of severity. Through these criteria, describing common, everyday behaviors of children, the rhetoric of science transforms them into what are purported to be objective symptoms of mental disorder. On closer inspection, however, there is little that is objective about the diagnostic criteria."

5) These medications are not at all effective in the long term.

- Neither the long-term effectiveness nor the long-term safety of stimulant medications has ever been demonstrated (Gillberg et al., 1997; Jacobvitz et al. 1990; Klein, 1993; Spencer, Biederman, Wilens, et al., 1996) Yet, precisely this information is needed to effectively weight the risks and benefits of treatment and to provide or receive truly informed consent."²⁰
- o "Parents and teachers should not expect long-term improvement in academic achievement or reduced anti-social behavior... Teachers and parents should not expect significantly improved reading or athletic skills, positive social skills, or learning of new concepts." ²¹
- "Stimulants do not produce lasting improvements in aggressivity, conduct disorder, criminality, education achievement, job functioning, marital relationships, or long-term adjustment."
- "Long term efficacy of stimulant medication has not been demonstrated for any (original emphasis) domain of child functioning."
- o "...these drugs have almost no effect on academic achievement."24
- "In FDA's 'Background Comments on Pediatric Depression,' (2000) Dr. Robert Temple, Office
 of Drug Evaluation at the FDA, acknowledged 'the preponderance of negative studies of
 antidepressants in pediatric populations."
- 6) The psychotropic medications, both on and off the controlled substances list, are far from benign; their side effects are rarely adequately explained to parents; and there are no studies defining their effects on the developing nervous systems of growing children, especially those under the age of five years.
 - According to research highlighted by psychiatrist, Dr. Peter Breggin in his book Talking Back to Ritalin, these medications actually cause the same symptoms they are supposed to treat hyperactivity, impulsivity and inattention, which can lead to a vicious cycle of incorrect and dangerous dosage increases.²⁶
 - These drugs work by altering brain function, causing a short-term change in behavior that may actually interfere with learning. They produce rote compliance in structured environments at the cost of spontaneity, creativity and social interaction. The stimulant drugs also impair flexible problem-solving and divergent thinking. James Swanson, a researcher for the U.S. Department of Education and leading Ritalin advocate, stated in a 1992 review of the medical literature that this type of "cognitive toxicity may occur at commonly prescribed clinical doses of stimulants," and in up to 40% of patients.²⁷

- Other very worrisome side effects include sleeplessness, weight loss, growth retardation including decreased brain growth, heart damage including cardiac arrest, atrophy (shrinkage) of the brain, psychosis, and violence.²⁸ Particularly concerning is a 1986 study that showed cortical atrophy in 50% of a group of 24 young adults who had been on Ritalin for several years in their childhood.²⁹ Dr. Breggin reiterates this concern by saying, "Brain structural abnormalities found in children diagnosed with ADHD and treated with stimulants to the extent that they are valid findings are almost certainly due to the stimulants and other psychiatric medication to which they have been exposed. These studies add to the accumulating evidence that psychostimulants cause irreversible brain damage.^{n,30}
- O Psychosis is one manifestation of the kind of brain damage that can occur from use of the stimulants. The risk of psychosis is listed in the package insert, but receives little attention from physicians and is rarely discussed with parents. Psychosis may happen as a toxic reaction to the stimulant medications or as they are withdrawn after long-term use. Previously thought to occur in 1% of patients on the stimulants, a 1999 study from the Canadian Journal of Psychiatry showed that the incidence of drug-induced psychosis is closer to 9% and that is probably an underestimate.³¹ A 1993 study by Koek and Colpaert states that Ritalin "induces a psychopathology that seems to mimic schizophrenic psychosis more closely than amphetamines and cocaine."³² These schizophrenic-like and manic-like reactions to stimulants are thought to lead to violence as well as depression and suicide.³³ All four of the perpetrators of the major school shootings were taking psychiatric drugs, some including Ritalin, at the time of their crimes.³⁴
- The package insert for Ritalin confirms that there are no long-term studies on the effects of these medications on young children's growing brains. It says in the "WARNING" section, "Sufficient data on safety and efficacy of long-term use of Ritalin in children are not yet available," and Ritalin should not be used in children under six years, since safety and efficacy for this age group have not been established." Yet, both of these warnings are routinely ignored as described by the Zito study in item 2 above.
- o "In 1991, Dr. Robert King and colleagues at Yale published one of the few reports about the emergence of self-destructive, suicidal behavior in children and adolescents during treatment with Prozac. They noted the need to study the incidence of medication-related agitation, self-injury and emerging suicidal obsession in children taking SSRIs. But neither NIMH nor the FDA has initiated such study.³³⁵
- Prozac (as has been shown above) generated more adverse drug reaction reports than any drug in America, including 2,000 reports of suicide deaths linked to Prozac which, by the agency's own calculations reflects but a fraction of the likely number of suicides."³⁶

- "Until the introduction of the atypical antipsychotics, clozapine (Clozaril) and olanzapine (Zyprexa), the condition [adult onset diabetes] was rare in children and adolescents At the August 2001 meeting of American Psychiatric Association, Dr. Frank J. Ayd,313 an internationally renowned psychopharmacology expert, and editor of the International Drug Therapy Newsletter, presented findings of his review of the literature for atypical antipsychotics. He found a "startling" association between initiation of treatment with olanzapine and new-onset diabetes in adolescents: 'New-onset diabetes after antipsychotic treatment initiation is startling, since the use of atypical antipsychotics has become the first line of treatment for schizophrenia...Twenty-six case reports were analyzed, of which 14 reports of diabetes, diabetic ketoacidosis (DKA) or worsening diabetic blood glucose control after initiation of olanzapine were found. Five (36%) of these patients developed DKA. Seventy-nine percent of the patients were compelled to discontinue their antipsychotic. Eighteen percent of the patients who discontinued their medications required long-term insulin; 18% required long-term oral hyperglycemic treatment.""
- "The drug company which makes Seroxat [the British version of Paxil], the antidepressant which thousands of people say they cannot give up because of severe withdrawal effects, is to drop the claim on its patient leaflet saying the drug is not addictive. The admission of a change of policy from GlaxoSmithKline, Britain's biggest pharmaceutical company, comes in a BBC Panorama
- programme to be shown on May $11^{.738}$ "Numerous reports have linked these drugs to serious adverse effects and potential long-term harm. TCAs have been linked to cardiac arrhythmias, and "sudden death."
- "The neuroleptic drugs used since the 1950s 'worked' by hindering normal brain function: they deemed psychosis, but produced pathology often worse than the condition for which they have been prescribed-much like physical lobotomy which psychotropic drugs replaced. But for forty years psychiatry denied that these drugs caused debilitating neurological, cognitive and motor impairment (Parkinson's symptoms). ... Psychiatry steadfastly denied the emergence of disabling drug-induced side effects such as tardive dyskinesia (TD), the second most pervasive drug-induced pathology...In fact, TD is a debilitating (often irreversible) condition caused by neurological damage, characterized by disfiguring involuntary muscle movements of the face and neck. Recent research findings corroborate earlier reports linking TD to a deterioration of cognitive functions. It is estimated that TD afflicts 40% to 60% of patients taking neuroleptics over time its incidence rate increases with each year."40
- 7) No psychiatric illness is caused by naturally occurring deficiencies of any psychiatric drug, but there are many reasons that children may have symptoms of mental illness that are overlooked by both schools and physicians that can be corrected without psychiatric drugs.

Here are some examples in the main categories:

- Medical
 - Other undiagnosed illnesses⁴¹
 - Reactions to medications for almost any illness⁴²
 - □ Nutritional/Metabolic⁴³
 - Artificial colors in food
 - Hypoglycemia
 - Food allergies and intolerances
 - Vitamin, mineral, and essential fatty acid deficiencies
 - Hormonal imbalances esp. thyroid
 - Amino acid imbalances
 - Inherited metabolic disorders

- Environmental allergies and toxicity⁴⁴
 - · Pesticides and chemicals used in homes and schools
 - Pollution
 - Radon
 - · Hormones and antibiotics in meat
 - Heavy metal toxicity
 - Lead and cadmium
 - Mercury from vaccines and dental fillings⁴⁵
- Vaccine reactions⁴⁶
- Overuse of antibiotics / yeast⁴⁷

Educational

- ILLITERACY "...up to 90 percent of children identified as SLD have reading as their primary area of difficulty." 48
- Increase in per pupil funding for schools (IDEA and Elementary and Secondary Education A Schools may exempt IDEA children from the federally mandated assessments that determing the majority of federal funding states and school districts receive based on "adequate yearly progress" under the ESEA. This is done frequently for minority students, which is one reason many minority students are labeled as emotionally disturbed or mentally retarded. The pupil funding in IDEA was changed in the 1997 reauthorization to prevent over-labeling, but that did not go into effect until 2000, so it is unclear that it has helped.
- Outcome based education via federal mandates These mandate the teaching of a psychosocially based curriculum⁵¹ that creates cognitive dissonance in children when taught by the schools to believe things other than those on which they have been raised.⁵² This curriculum also deprives poor children of the academic basics that they desperately need to obtain a better life. The boredom and frustration can lead to behavior problems and even violence.⁵³
- Attempt to gain correct thought and action based on federal curriculum⁵⁴ Much personal and psychological data is collected on students via surveys and assessments. One example from the Cornell Review and Fox News, which documented in January, 2002 is a stunning example of grading based on attitudes, which could easily lead to labeling and drugging: "School officials in Ithaca, N.Y., are requiring that first- and second-graders there be graded on their tolerance, reports the Cornell Review. The kids will get grades based on how well they 'respect others of varying cultures, genders, experiences, and abilities.' The grade will appear on report cards under the heading 'Lifelong Learning Skills.' It appears well before social studies, science, reading, or writing." Lifelong Learning is part of the School to Work program, which also passed in 1994. STW tracks children into jobs chosen by big business and the government. Success in this system depends not on what one knows, but rather what one thinks and believes.
- Effort to gain academic advantage (e.g. untimed tests)
- Boring, ineffective, and unsafe classrooms

o Societal

Behavior control tool for parents and teachers

- Societal changes and pressures
 - Divorce
 - Daycare
 - · Teen parenthood
 - "Hurried" child
 - Television and video games
 - Temptation for people to want to receive Social Security disability income
 - Feminism The War Against Boys⁵⁸
 - Drug company profits
- 8) Although this bill is a tremendous and incredibly important means to protect our children, it is only a first step. Left as is, this legislation may have the tragic unintended consequence of creating an incentive for schools to coerce parents to put their children on the other approximately 36 psychotropic medications that are not on the controlled substances list.
 - Psychiatric drugs on the controlled substances list⁵⁹ Total 8-14 if counting various forms and brands of methylphenidate, methamphetamine, and amphetamine
 - Schedule II Ritalin, Focalin, Concerta, Metadate (all forms of methylphenidate),
 Desoxyn, Gradumet (forms of methamphetamine) Dexedrine, Dextrostat (forms of damphetamine), and Adderall (combination of amphetamine and d-amphetamine)
 - □ Schedule III Tranxene, Valium, Ativan, Xanax
 - □ Schedule IV Cylert
 - o Drugs NOT on the controlled substances list⁶⁰ Total 36
 - ADHD Straterra, whose side effects are largely unknown because it has only been on the market since January of 2003, but is already gaining considerable market share.
 - "Shire Pharmaceuticals has suffered a blow after Eli Lilly posted better than expected sales of a rival to the company's number one Adderall hyperactivity drug.
 Industry experts said news that Eli Lilly's Strattera attention deficit and hyperactivity disorder drug had achieved sales of \$55 million since its US launch in January had damaged Shire's share price.
 Straterra's performance had exceeded expectations, and projected over the rest of the year, these early sales figures could considerably undermine Adderall's market share."61
 - ☐ SSRIs for Depression, Panic, Obsessive Compulsive Disorder, and Anxiety Paxil, Prozac, Luvox, Zoloft, and Celexa
 - Note the concerns about suicide, violence and addiction/withdrawal with these drugs listed in item 6 above.
 - Eric Harris of Columbine; Kip Kinkel of Springfield, Oregon; and Jason Hoffman of San Diego were all on this class of medication at the time of their school shootings.
 - Other Antidepressants Effexor, Remeron, Serzone and Wellbutrin
 - Monoamine Oxidase Antidepressants Nardil and Parnate (not often used anymore in children)

- □ Tricyclic Antidepressants Norpramin, Sinequan, Surmontil, Aventyl, Elavil, and Vivactil (not used as often since the SSRIs came on the market, but still used in children)
 - Note the concerns regarding cardiac arrhythmia and sudden death with these drugs and that Shaina Dunkle died of this toxicity after being coerced by her school to take desipramine (Norpramin)
- Anti-Manic Agents Depakote, Eskalith, Lithobid, Zyprexa
 - · Note the discussion of adult onset diabetes due to Zyprexa, which is also used to treat psychosis in children and adolescents as discussed in item 6 above.
- □ Miscellaneous Antipsychotic Agents Clozapine, Clozaril, Geodon, Haldol, Loxitane, Moban, Navane, Risperidal, Seroquel
 - Note the concern about adult onset diabetes in children due to Clozaril as discussed in item 6 above.
- Phenothizines Compazine, Serentil, Stelazine, Thorazine
 - Note the strong concern about tardive dyskinesia, motor and cognitive impairment due to these drugs as discussed in item 6 above.
- □ Antipanic Klonopin

RECOMMENDATIONS:

- 1) Due to the possibility of coercion with drugs that are not on the controlled substances list; that drugs not on the controlled substances list have caused serious side effects such as psychosis, suicide, violence, addiction, diabetes and neurological problems; that there are no long term studies on the safety or effectiveness of any of these medications in growing children; and because the decision to have a child take these drugs should be solely between parents and medical providers, all of the groups that I represent strongly recommend that HR 1170 be changed to prohibit coercion with any psychiatric drug.
- 2) The penalty of "as a condition of receiving funds under any program or activity administered by the Secretary of Education" is very welcome because a prohibition without teeth would be meaningless. Please do not take this language out as was done in HR 1350 or consider a stronger penalty such as loss of some percentage of funds for each occurrence of coercion.

Thank you for your consideration.

ENDNOTES:

Sharov, V., (2003) Children in Clinical Research: A Conflict of Moral Values, The American Journal of Bioethics

^{3(1):}InFocus, http://bioethics.net/in_focus/sharav.pdf, p. 15

*Presidential Commission Report - A NEW ERA: Revitalizing Special Education for Children and their Families 7/02, p. 21at http://www.ed.gov/inits/commissionsboards/whspecialeducation/reports/pcesefinalreport.pdf Ibid, p. 23

⁴ MN Dept of Children Families and Learning data from annual reports on students receiving IDEA funds

⁵ Zito, J., et al. (2/23/00) Trends in the prescribing of psychotropic medications to preschoolers. Journal of the American Medical Association, 283:1025-1030

⁶ Zito, J., et al. (1/13/03) Psychotropic Practice Patterns for Youth A 10-Year Perspective. Archives of Pediatric &

Adolescent Medicine, 157:17-25

```
<sup>7</sup> Griffith, D., Pills or Patience? (6/23/02) Sacramento Bee, 6/23/02 at http://www.sacbee.com/content/news/story/3313233p-
4344565c.html
 Sharav, p. 27 of pdf
<sup>9</sup>Montero, D., (8/7/02) I was forced to dope my kid. New York Post at http://www.nypost.com/news/regionalnews/54243.htm last
visited 8/30/02
 <sup>0</sup>Karlin, R., (7/19/00) Court orders couple to give son drug (Ritalin) after school turns parents in, Albany Times Union
Montero, D., (8/14/02) Bush's Bro: My Son was a Victim of School Rx, New York Post at
http://www.nypost.com/seven/08142002/commentary/54735.htm last visited 8/30/02
<sup>13</sup> (June, 2002) A Parent's Nightmare: Losing a Child to Drug-Induced Psychosis, Education Reporter at
http://www.eagleforum.org/educate/2002/june02/drug-induced.shtml last visited 5/13/03
  Eakman, B., (September, 2002) Uncle Sam's Classrooms, Chronicles, pp. 40-42 at
http://www.beverlye.com/classroom_20000821.html last visited 5/13/03
  http://ritalindeath.com/homepage.htm last visited 5/13/03
  http://ritalindeath.com/crusade.htm last visited 5/13/03
<sup>17</sup>American Psychiatric Association Committee on the Diagnostic and Statistical Manual (DSM IV- 1994), pp.1162-1163
18 NIH Consensus Development Panel, (2000) p. 183
19 Kirk, S. and Kutchins, H. (1992). The selling of science in psychiatry, New York: Aldine DeGruyter
<sup>20</sup> Jenson and Cooper, p. 10-8
<sup>21</sup> Swanson, J., (circa. 1993) Research synthesis of the effects of stimulant medication on children with attention deficit disorder: A
review of reviews. Executive Summary prepared for Division of Innovation and Development, Office of Special Education Programs,
Office of Special Education and Rehabilitative Services, U.S. Department of Education, Washington D.C. as quoted in Breggin, P.,
(2001) Talking Back to Ritalin, Cambridge, Massachusetts, Perseus, pp. 125 and 127
<sup>22</sup> Popper, C. and Steingard, R. (1994) Disorders usually first diagnosed in infancy, childhood or adolescence in Hales, R. et al (Eds.), The American Psychiatric Press Textbook of Psychiatry, 2<sup>nd</sup> Edition, Washington, D.C., American Psychiatric Press, pp. 729-832 as
quoted in Breggin, p.125

Richters, J., et al. (1995) NIMH collaborative multisite, multimodal treatment study of children with ADHD: I. Background and
Rationale, Journal of the American Academy of Child and Adolescent Psychiatry, 34, pp. 987-1000 as quoted in Breggin, p. 125

Health and Cunningham, C. (1978) Do stimulant drugs improve the academic performance of hyperkinetic children? A review
of outcome studies. Clinical Pediatrics, 8, pp. 137-146 as quoted in Breggin, p. 129
   http://www.fda.gov/cder/pediatric/antidepressant wr_template.htm.as quoted in Sharav, p. 16
<sup>26</sup> Breggin, p. 40
<sup>27</sup> Ibid., pp. 49-50
<sup>28</sup> Ibid., p. 32
<sup>29</sup> Nasrallah, H., et.al., (1986) Psychiatry Research 17:241-246, as quoted in ibid., p.67
<sup>30</sup> Ibid., p. 69
31 Cherland and Fitzpatrick, (October, 1999) Canadian Journal of Psychiatry, as quoted in ibid., p. 45
32 Koek, W., and Colpaert, F.C., (1993) Journal of Pharmacology and Experimental Therapeutics, Vol. 267, p. 181-191, as quoted in
ibid, p. 46
33 Ibid., p. 47
<sup>34</sup> See Farber, B., (July 2, 2001) The Link Between Anti-depressants and Mayhem, Newsmax.com, at
http://www.newsmax.com/archives/articles/2001/7/2/181622.shtml

35 King RA, Riddle MA, Chappell PB, Hardin MT, Anderson GM, Lombroso P, Scahill L. (1991)
Emergence of self-destructive phenomena in children and adolescents during fluoxetine treatment. Journal of the American Academy
of Child & Adolescent Psychiatry, 30:179-86, as quoted in Sharav, p. 28 of pdf <sup>36</sup> FDA Center for Drug Evaluation and Research. ADR reports for Prozac between 1987-1995.
Document HFL-35. Obtained by Prozac Survivor's Support Group, Inc. under the US Freedom of Information Act. A summary version of the FDA statistics is available online at: http://www.cris.com/-shddemon/prozac.reactions <sup>37</sup>Ayd, FJ. 2001. Research Presented at Annual Meeting. Psychiatric Times (August) Vol. 18.
```

Accessed February 25, 2003 online at: http://www.psychiatrictimes.com/p010823.html as quoted in Sharav, p. 37 of pdf

Bosley, S. (May 3, 2003) Seroxat maker abandons 'no addiction' claim - Firm agrees to alter leaflet to patients after complaints. At

http://www.guardian.co.uk/Print/0.3858.4660951,00.html

39 See, for example, Wilens TE; Biederman J, Baldessarini RJ, Geller B, Schleifer D, Spencer TJ, Birmaher B, Goldblatt A.. 1996. Cardiovascular effects of therapeutic doses of tricyclic antidepressants in children and adolescents. Journal Of The Association Of American Child & Adolescent Psychiatry. 35: 1491-501; Mezzacappa E, Steingard R, Kindlon D, Saul JP, Earls F. 1998. Tricyclic antidepressants and cardiac autonomic control in children and adolescents. Journal Of The Association Of American

Child & Adolescent Psychiatry. 37 52-9. Also see, for example, Riddle MA, Geller B, Ryan N. (1993) Another sudden death in a

```
child treated with desipramine. Journal Of The Association Of American Child & Adolescent Psychiatry, 32:792-7. See also, Kutcher,
S. 1997. Practitioner review: the pharmacotherapy of adolescent depression. Journal of Child Psychiatry. 38: 755-67; Swanson J. M.,
Kraemer, H. C., Hinshaw, S. P., Arnold, L. E., Conners, C. K., Abikoff, H. B., et al. 1997. Death of two subjects due to
imipramine and desipramine metabolite accumulation during chronic therapy: a review of the literature and possible mechanisms. Journal of Forensic Science. 42: 335-9; and Varley, C. K. and McClellan, J. 1997. Case study: two additional sudden deaths with
tricyclic antidepressants. Journal Of The Association Of American Child & Adolescent Psychiatry. 36: 390-4 as quoted in Sharav, p.
```

16.

See, Miller LG, Jankovic J 1990 Neurologic approach to drug-induced movement disorders: a study of 125 patients. South Med J. 83:525-32; Braus DF, et al. 1999. Antipsychotic drug effects on motor activation measured by functional magnetic resonance imaging in schizophrenic patients. Schizophrenia Research. 39:19-29; Muscettola, G. et al.1999. Extrapyramidal syndromes in neuroleptic-treated patients: prevalence, risk factors, and association with tardive dyskinesia.

Journal of Clinical Psychopharmacology, Jun, 19:203-8. Also see McShane R, Keene J, Gedling K, Fairburn C, Jacoby R, Hope T. 1997. Do neuroleptic drugs hasten cognitive decline in dementia? Prospective study with necropsy follow-up. British Medical Journal, 314: 266-271; Paulsen, JS. et al. 1994. Neuropsychological impairment in tardive dyskinesia. Neuropsychology. 8: 227-241; Waddington JL, Youssef HA. 1996. Cognitive dysfunction in chronic schizophrenia followed prospectively over 10 years and its longitudinal relationship to the emergence of tardive dyskinesia. Psychological Medicine. 26: 681-688 and

Sachdev P, Hume F, Toohey P, Doutney C. 1996. Negative symptoms, cognitive dysfunction, tardive akathisia and tardive dyskinesia. Acta Psychiatrica Scandinavica, 93:451-459. All are as quoted by Sharav, p. 38.

See any pediatric or internal medicine textbook.

42 See any edition of the Physician's Desk Reference or any pharmacology textbook.

⁴³ See, for example, Murray, M. and Pizzorno, J., (1998) Encyclopedia of Natural Medicine, Revised 2nd Edition, Rocklin, CA, Prima Publishing pp. 273-281

44 See, for example, Rapp, D., (1996) Is This Your Child's World? - How You Can Fix the Schools and Homes That Are Making Your

Children Sick, New York, Bantam

Cave, S., (2001) What Your Doctor May NOT Tell You About Children's Vaccinations, New York, Warner Books, p. 39-56 46 Ibid., pp. 57-78

⁴⁷ Crook, W., (1991) Help for the Hyperactive Child, Jackson, TN, Professional Books 48 A New Era, p. 22

49 See The No Child Left Behind Act of 2001, Section 1111, (b)(2)(C)

50 See (2002) Minority Students in Special and Gifted Education, Washington D.C., National Academy Press, especially Chapter 2 at http://books.nap.edu/books/0309074398/html/index.html

See the Goals 2000 chapter of Quist, A. (1999) The Seamless Web. Mankato, MN Maple River Education Coalition
 Eakman, B., (September 2002) Bushwhacking Johnny, Chronicles Magazine, pp. 41-43 at

http://www.beverlye.com/bushwhack_20020902.html

Brunner, M., (1993) Retarding America, Imprisoning Potential, Halcyon House as quoted in Eakman, B. (1998) Cloning of the American Mind: Eradicating Morality through Education, Lafayette, LA, Huntington House p. 385

See Quist, A. (2002) FedEd – The New Federal Curriculum and How It's Enforced. St. Paul, MN The Maple River Education

Coalition

See Effrem, K. Data Privacy Chapter of Quist, A., (1999) The Seamless Web, Mankato, MN Maple River Education Coalition at

http://www.edwatch.org/seamless_web.htm

⁵⁶ Fox News (1/7/02) Education Priorities at http://www.foxnews.com/story/0,2933,42242,00.html

⁵⁷ See Chapman, M., and Bachmann, M., US Policy embraces State-Planned economy, Maple River Education Coalition at http://www.edaction.org/upda0219.htm

58 See Sommers, C. (2001) The War Against Boys: How Misguided Feminism is Harming Our Young Men, Touchstone (2003) Physicians' Desk Reference, 57th Edition, Montvale, NJ, Thomson PDR, pp. 208 and 213

60 Ibid., p. 213

61 Shire slips as Lilly positive on rival drug (April 25, 2003) at

http://www.datamonitor.com/~aa81043764464e2ab7ab752e7b4f6216~/healthcare/news/product.asp?pid=A2733C20-12C4-439B-B01A-5F296B4947AC

APPENDIX I – WRITTEN STATEMENTS FROM THE NATIONAL MENTAL HEALTH ASSOCIATION SUBMITTED FOR THE RECORD BY RANKING MEMBER LYNN C. WOOLSEY, SUBCOMMITTEE ON EDUCATION REFORM, COMMITTEE ON EDUCATION AND THE WORKFORCE, U.S. HOUSE OF REPRESENATIVES, WASHINGTON, D.C.



STATEMENT TO THE MEDIA

Leave No Child Behind – Unless They Have a Mental Disorder NMHA Fears Schools Could be Forced to Ignore Children's Mental Health Needs

Statement by Michael Faenza, NMHA President and CEO

ALEXANDRIA, Va. (May 6, 2003) – Today's House Education and Workforce Subcommittee hearing, "Protecting Children: The Use of Medication in Our Nation's Schools," misses a great opportunity for Congress to truly protect the mental health of America's children. Instead, the hearing's narrow focus on psychotropic medications advances a dangerous agenda that leaves children with mental health needs behind.

With children in the classroom for the majority of their day, teachers and school health professionals are well positioned to identify health problems and to communicate their concerns with parents and caregivers. School personnel frequently recommend hearing and vision evaluations for children. Why should there be a different standard for recommending a mental health assessment?

NMHA recognizes the importance and value of prevention, early intervention and treatment services for children, and we encourage communication between educators and parents because it can lead to better outcomes for our kids.

According to the President's New Freedom Commission on Mental Health Interim Report one or two youth with serious emotional problems are in every American classroom. Yet, nearly 80 percent of children who need mental health treatment do not receive it. With these statistics, it is no wonder the President's Commission called our nation's failure to prioritize mental health "a national tragedy."



Protecting Children (Cont.)

A full range of effective treatments for children with mental health problems exist including psychotherapy, psychosocial treatments, home-based services, intensive case management, and psychotropic medications. The consequences of untreated mental health problems are serious and painful. Lack of appropriate care can lead to increased contact with the juvenile justice system, poor school performance and even suicide – the third leading cause of death among young people.

It is worth noting that the President's Commission on Mental Health's Interim Report recommends that the mental health service system consider new ways to deliver care to children "in a place long overlooked, our Nation's schools." NMHA agrees with this assertion and on the need to end the stigma around mental illness in order to provide mental health services to every child who needs them.

In addition, NMHA believes that the role of medication in the treatment of emotional, behavioral and mental disorders in children should include: a comprehensive evaluation of a child by a qualified mental health professional; an integrated treatment plan that, when clinically appropriate, may include medication therapies; and the involvement of the family and child in treatment decisions.

NMHA looks forward to the opportunity to work with Congress to advance policies and programs that would ensure that children with mental health needs are not left behind.

The National Mental Health Association is the country's oldest and largest nonprofit organization addressing all aspects of mental health and mental illness. NMHA works to improve the mental health of all Americans through advocacy, education, research and service.

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Media Advisory

May 6 is Childhood Depression Awareness Day Less Than One-Third Of Children and Teens With Depression Receive Treatment

ALEXANDRIA, Va. (May 1, 2003) On May 6, Childhood Depression Awareness Day, thousands of children, families, physicians and advocates will be working in communities around the nation to get the word out that childhood depression is real, common and treatable.

"The fact that one in five children have a diagnosable mental health problem but less than a third receive care is cause for alarm," says Michael Faenza, president and CEO of NMHA. "Promoting mental health awareness and knowing the warning signs are essential to improving and even saving young people who may be risk for depression and other mental illnesses."

The symptoms of depression may look different in youth than in adults, and as a result, are often overlooked or misunderstood. Consequences of untreated depression can include social isolation, difficulties at home and school, and an increased risk of suicide.

Warning signs of depression in a child or adolescent include:

- Sad, hopeless or irritable feelings
- · Falling behind in school or earning lower grades
- Losing interest in friends or activities usually enjoyed
- Avoiding people; wanting to be alone all of the time
- Talking about suicide or death
- · Hurting other people or animals; damaging property
- Major changes in eating or sleeping habits

Depression affects as many as one in every 33 children and one in eight adolescents, according to the federal Center for Mental Health Services. Once a child experiences an episode of depression, he or she is at risk of having another episode within the next five years.

The mother of a child with depression established Childhood Depression Awareness Day in 1997, and NMHA took the program nationwide. Experts on children's mental health and children with depression or other mental disorders are available for telephone interviews throughout May is Mental Health Month.

The National Mental Health Association is the country's oldest and largest nonprofit organization addressing all aspects of mental health and mental illness. With more than 340 affiliates nationwide, NMHA works to improve the mental health of all Americans through advocacy, education, research and service.

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Children and Access to Medications

The prevalence of emotional, behavioral and mental disorders in children is well documented, as shown by the 1999 Report of the Surgeon General on Mental Health. Evidence demonstrates the availability of a range of effective treatments for children with emotional, behavioral and mental disorders. The range of available treatments and services includes psychotherapy, psychosocial treatments, home-based services, intensive case management, therapeutic foster care, and psychotropic medications. Yet, only a third of children who need mental health treatment receive any at all – and even fewer receive appropriate care.

While significant barriers exist to overall access to mental health treatment for children, policy debates surrounding access to medications for children, in particular, have increased in frequency and volatility. The controversy surrounding access to psychotropic medications for children can be attributed to several factors, including: existing stigma relating to mental illness; misinformation about the use and effects of psychotropic medications in children; the lack of pediatric labeling explaining to clinicians the parameters of safe and effective prescription of psychotropic medications in children; and a scarcity of research around long-term effects of these medications.

NMHA principles concerning the role of medication in the treatment of emotional, behavioral and mental disorders in children include:

- comprehensive evaluation of children by qualified mental health professionals;
- · an integrated treatment plan that, when clinically appropriate, may include medication therapies;
- · the involvement of the family and child in treatment decisions;
- disclosure to the family of information about medication, its benefits and side-effects.

NMHA offers the following information to support advocates in making the case for access to medications for children.

Mental Illnesses In Children Are Common

- Four million American youth have a major mental illness that results in significant impairment at home, at school and/or with peers.²
- Studies cited by the National Institute of Mental Health show that approximately one child in every
 classroom in the United States needs help for attention deficit hyperactivity disorder (ADHD), which is
 the most commonly diagnosed behavioral disorder of childhood.³
- As many as one in every 40 children and one in 12 adolescents may have depression.⁴ Major depression among all children ages nine to 17 has been estimated at five percent.⁵
- Anxiety disorders, including separation anxiety, generalized anxiety, social phobia and obsessivecompulsive disorder, affect as many as 13 percent of young people ages nine to 17 in a given year.⁶
- Children diagnosed with ADHD commonly suffer from co-occurring disorders, including oppositional/conduct disorders, anxiety, depression, and learning disorders.

Medication is an Effective Component of Treatment

- A range of effective treatments exists for children with mental health problems, including ADHD, depression and conduct disorder.
- There is strong evidence for the effectiveness of both pharmaceutical and psychosocial treatments, as
 well as home-based services, therapeutic foster care, and intensive case management, for specific
 disorders.⁸
- The NIMH Multimodal Treatment Study of ADHD (called the MTA Study) demonstrated the effectiveness of medication therapies. The study found that school-aged children with ADHD who received treatment combining medication with behavioral therapy showed a marked improvement in six outcome areas social skills, parent child relations, internalizing (e.g., anxiety) symptoms, reading achievement, oppositional and/or aggressive symptoms, and parent and/or consumer satisfaction. When single forms of treatment were used (medication or behavior therapy) alone, improvement occurred in one or two of these areas. 9,10,11
- The Surgeon General's report cites recent studies that found little evidence of overdiagnosis of ADHD or overprescription of stimulants.¹²
- Parents and children should be involved in treatment decision-making, and be provided with complete information about medication side effects, benefits, and alternatives.

Significant Barriers To Treatment Exist

- Only a third of the children who need mental health treatment receive any at all. According to studies
 cited in the Surgeon General's report on children's mental health, fewer children are being treated for
 ADHD than suffer from it, and treatment rates are even lower among girls, children of color and
 children receiving care through public service systems.¹³
- Barriers to mental health treatment include fragmented service systems, insufficient specialist networks, inadequate or absent insurance coverage, and long waiting lists.¹⁴
- Complex policies for accessing medication therapies can also deny children and families this important
 component of treatment. Obstacles include limits on the number/quantity of prescriptions per month,
 lengthy prior authorization procedures, fail-first policies, discriminatory co-payments and mandatory
 therapeutic or generic substitutions.

More Research Is Needed

While the effectiveness of medications as part of treatment for some disorders has been shown, three-fourths of all medications used by children are prescribed "off label," meaning that they have not been approved by the federal Food and Drug Administration (FDA) for use by children. Further research is needed to:

- Ensure proper pediatric labeling of medications, indicating how they can safely and effectively be used
 to treat children.
- Address the concerns of families and clinicians about potential long-term effects of medication on children's development.
- Identify treatment options for children with ADHD and co-occurring conditions such as anxiety, depression, oppositional defiant disorder, conduct disorder and learning disabilities.

Advocates Should Challenge Federal, State and Local Decision-Makers To:

- · Invest in community-based mental health services for children and their families.
- Safeguard access to a comprehensive range of treatment services, including medications, for children
 with mental health needs and their families.
- Address broader issues related to children's unmet mental health needs, including fragmented service systems and the lack of culturally appropriate care.
- Develop incentives to expand the pool of mental health professionals specializing in the diagnosis and treatment of children and adolescents.

- Advocate for increased development and testing of medications specifically for children, through ethically designed clinical trials.
- Require that the FDA develop appropriate labeling of medication for children, explaining how medications can safely and effectively be used with children.

For more information, contact the National Mental Health Association at 1-800-969-NMHA or visit our website at www.nmha.org.

¹ NMHA Policy Position Statement (NMHA Position P-44, 2000).

² U.S. Surgeon General, 1999. Report on Mental Health, Chapter 3: Children and Mental Health.

³ Shaffer, D. et al. (1996). Psychiatric diagnosis in child and adolescent suicide. Archives of General Psychiatry, 53, 339-348. Wolraich, M.L. et al. (1996). Comparison of diagnostic criteria for attention-deficit hyperactivity disorder in a county-wide sample.

Journal of the American Academy of Child and Adolescent Psychiatry, 35, 319-324.

Birmaher, B., Ryan, N.D., Williamson, D.E. et al. (1996). Childhood and adolescent depression: A review of the past 10 years. Part I. Journal of the American Academy of Child and Adolescent Psychiatry, 35, 1427-1439

⁵ Shaffer, D. et al. Archives of General Psychiatry.
⁶ Shaffer, D. et al. (1996b). The NIMH Diagnostic Interview Schedule for Children Version 2.3: Description, acceptability, prevalence rates, and performance in the MECA Study. Methods for the Epidemiology of Child and Adolescent Mental Disorders Study. Journal of the American Academy of Child and Adolescent Psychiatry, 25, 865-877.

American Academy of Pediatrics, Committee on Quality Improvement and Subcommittee on Attention-Deficit/Hyperactivity Disorder. Diagnosis and evaluation of the child with ADHD. Pediatrics. 2000; 105: 1158-1170.

Burns, B., Hoagwood, K., & Mrazek, P. 1999. Clinical Child and Family Psychology Review, 2 (4), 199-254.

U.S. Surgeon General, 1999. Report on Mental Health, Chapter 3: Children and Mental Health.

Jensen, P., Arnold, L., Richters J, et al. 14-month randomized clinical trial of treatment strategies for attention deficit hyperactivity disorder. Archives of General Psychiatry. 1999; 56: 1073-1086.

Conners, C.K., Epstein, J.N., March, J.S., et al. Multimodal treatment of ADHD (MTA): an alternative outcome analysis. Journal of

the American Academy of Child and Adolescent Psychiatry. 2000; 40: 159-167.

Goldman, L.S. et al. (1998). Diagnosis and treatment of attention-deficit/hyperactivity disorder in children and adolescents. Council

on Scientific Affairs, American Medical Association. Journal of the American Medical Association, 279, 1100-1107. Jensen, P.S. et al. (1999). Psychoactive medication prescribing practices for U.S. children: Gaps between research and clinical practice. Journal of the American Academy of Child and Adolescent Psychiatry, 38, 557-565.

Bussing, R., Zima, B., & Forness, Sr. R. (1998). Children who qualify for LD and SED programs: Do they differ in level of ADHD

symptoms and comorbid psychiatric conditions? Behavioral Disorders, 23, 85-97. Bussing, R. et al. (1998b). Children in special education programs: Attention deficit hyperactivity disorder, use of services and unmet needs. American Journal of Public Health, 88,

^{880-886.}Heagwood, K., Kelleher, K., Feil, M., & Comer, D. (1999). Treatment services for children with ADHD: A national perspective.

APPENDIX J - WRITTEN CORRESPONDENCE FROM UTAH CONSTITUENTS SUBMITTED FOR THE RECORD BY HON. KATHERINE BRYSON, STATE REPRESENTATIVE, UTAH HOUSE OF REPRESENTATIVES, OREM, UTAH.

This statement will only touch on a small part of the school system of Utah and my child. Creighton, my son, attended Kindergarten at Valley Crest Elementary School uneventfully. By the middle of 1st grade, I was told that Creighton needed to grow up and be responsible. He was too immature.

Dr. Karen Lloyd, public school psychologist, tested Creighton in 1993. She could not interpret the test. Through the results, she couldn't teil if he was an idiot or a genius. She could not recommend a course of action.

I attended many workshops on learning disabilities, ADA, and Education of your child. I was told that he could and should receive an education through the public school system. When he was in the 3rd grade, the teacher, Robin Anderson, said that she had eight boys in her classroom just like Creighton and it was very difficult to teach. She said that some were on medication and recommended that Creighton be on some. I talked with our pediatrician, and told him what the teacher had said. He prescribed Ritalin without further testing.

I had him tested with a private psychologist, Dr. Steven Szykuia, on and off the Ritalin. It was proven ineffective for Creighton. However, the school thought be was better on the Ritalin and wanted him left on the medication. By the 4th grade, the school wanted me to increase the dosage and frequency of the Ritalin and also see about additional medication for depression. He was up to 25mg, of Ritalin a day. When I felt I was at an . impasse with the school Monte Vista, I called the Jordan School District Superintendent, Tom Owens. He told me that Principal Gotay had already called him. He refused to meet with me and said he stands behind his teachers test findings. I told him that I had had Creighton privately tested with Sam Goldstein, and there were many recommendations that the staff could follow. Tom Owens said that he knew Dr. Goldstein and didn't care what he had to say and that the teachers knew what they were doing. The last IEP(Individual Education Plan) I attended, I was told by Principal Gotay that there was nothing they had to offer my child at that school. They would have to recommend that he would have to be put in a behavioral disorder unit. I was refused to inspect the unit. However, they told me that there were policeman on duty in a locked facility. They used locked boxes and physical restraint for bad behavior. I took my child out of the system.

The worst thing I did for my child was to put him on Ritalin and have massive counseling done.

When I took my son out of public school, I expressed concern to Principal Gotay that I was worried about children like Creighton that had no one to speak for them. She responded that I had nothing to worry about and that they would be taken care of. I seriously wonder how that could be since they made so many judgmental errors with my son.

I put him in a private school. He has been on no medication and had no counseling since he left the public school system in the 4th grade. He is now in the 9th grade and is doing well.

I am M. Thomas Boley representing my wife, who bectique of an emergency is surpuble to be here today. The following is her statement: I amy Unn L. Boley a long time tracker of patural surpries in the France School District.

Some four years sago mental health professionals provided a one hour originalism and assigned to the teaching staff the responsibility of anesting the expedience parameters of our students, judenti figures deviant fandor debiliting behavior and in the school seeded there to the school administration or appropriate mental health representative

2 persuading parents of students to resk out or at least not resist the intervention of mental health professionals with various forms of mental health therapy including mood attering I, along with others of the teaching staff wars appulled with the assigned responsibilities

Our backgrounds are as teachers in various of the secondary education accademic disciplines: biology, languages, mathamatics and etc. We save not human behavior specialists any more than are we astronauts.

By our every attempting this assignment, we would run terrible rishs of suporing children to howible trame, damage to their regulations und multiple social problems with their peers.

In suddition the teacher is a "forced," candidate as defendent in all sorting beligation Respectfully

Mun & Boley

My name is Chuck Pullan. I live in the Salt Lake valley in Utah. I have a 9 year old son named Preston. Preston likes computer games, taking apart old electronic devices, and movies. Outdoors he likes to hike, climb, collect rocks and insects and play with friends. When people meet Preston, they often remark on how resolute and mature he is. He has a way of making verbal observations that is beyond his years.

Preston wants to be a scientist, though the sort of scientist he wants to be changes from time to time. He says he wants to make things when he grows up, and I believe it when I watch him play Legos. He has a pet lizard and wishes it was a snake. He has a big brother and wishes he never started liking girls. Most people who know him think he is a pretty remarkable kid.

Two years ago, Preston's school counselor aproached me about his behaivior. He was very careful with his words, but also clear in their meaning. He said he felt like Preston was having a hard time, and that he wanted to work with me on it. Of course I wanted the same. Preston had been slow to read, but was reading as good or better than his big sister after some extra time at home, so I felt that we just needed to work on his problem areas a bit better. The counselor had a different idea. He told me that because of new laws coming forth in the Utah legislature, he had to be very careful to not diagnose my son, but that he felt we should get him evaluated by a psychiatrist. After a little research, I found that there was only one course of action on the minds of these 'psychs': medication. Every lead I followed, every parent I spoke to had the same horrifying revelation: medicate the kid to make him normal. As a parent, I was shocked, and very very scared. Why was there no one who was remotely interested in getting to know my son before writing a prescription? The school couselor even remarked that he 'felt that his mother was having a hard time being a mom', but didn't want to cause friction with her and the school, and so decided to encourage me to drug my son to make things easier on her. He even seen problems in his two siblings that indicated a problem at home, but took no action, other than to suggest that Preston MAY be ADD.

Preston is doing much better in school now. He has had a great tescher for the past year and lots of encouragement from me and others when he does well. He responds wonderfully when we take priveledges away to keep him focused on good grades, and his self esteem is better. No drugs were given him to achieve this, but I often wonder how things would have gone if that counselor had felt more free to diagnose my son, or even to have forced me to take him to prescription happy psych.s. After much research, I am forced to believe that Preston would not be the same person he has naturally become. That same research leads me to believe that the might even have become a drug abusive adult to replace the drugs that he was given as a child.

My son is a compassionate, inteligent boy who wants to make the world a better place. I hope that the educators in his future are forced to approach this normal little boy as cautiously as those prior, so that he has the opportunity to become the man that he wants to become. If he is allowed this one liberty, we may all reap the benefits of his endeavors.

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